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UNITED STATES DEPARTMENT OF AGRICULTURE

DEPARTMENT BULLETIN No. 1237

Washington, D. C. May, 1924

ORGANIZATION AND DEVELOPMENT OF A COOPERATIVE CITRUS-FRUIT MARKETING AGENCY

By

A. W. McKAY, Specialist in Agricultural Cooperation and W. MACKENZIE STEVENS, Formerly Associate Marketing Specialist, Bureau of Agricultural Economics

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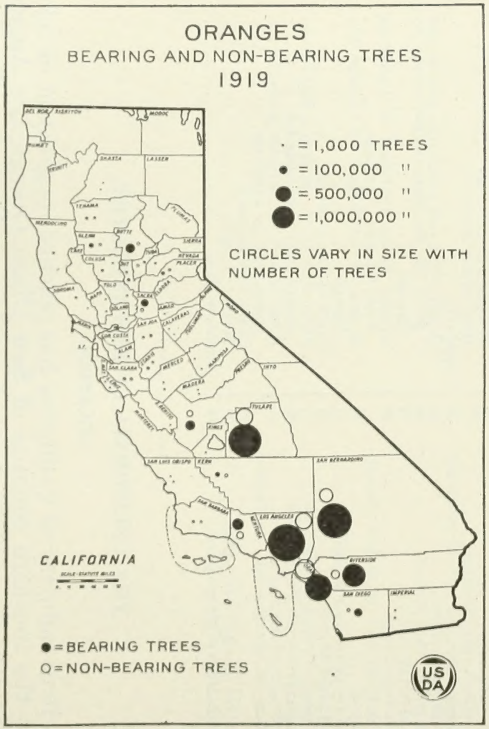
THE CALIFORNIA CITRUS INDUSTRY.

LOCATION.

The citrus industry of California has reached its greatest development in the southern counties of San Diego, Orange, Los Angeles, Riverside, San Bernardino, Ventura, and Santa Barbara. The foothill regions and lower lands along the southern base of the Sierra Madre range from Los Angeles to San Bernardino form an important district. The Riverside district wa the original navel district and is still one of the most importan sections. Orange County is the most important center for the Valencia orange, and the San Fer-



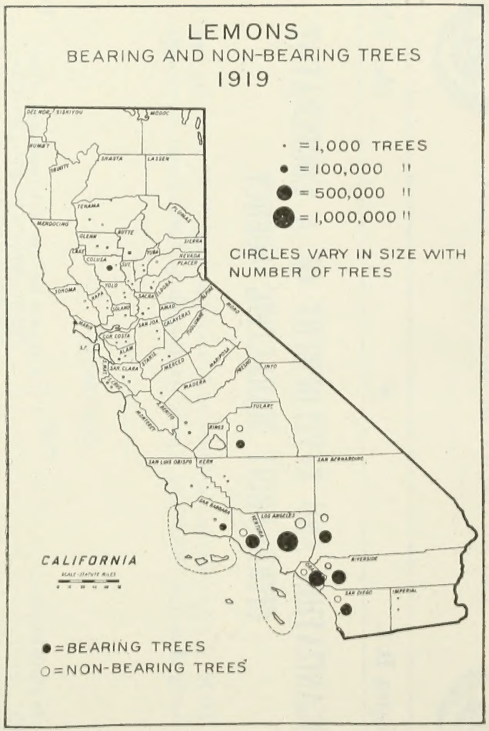


FIG. 1.—Location of citrus fruit trees in California. Both oranges and lemons are grown to a very limited extent throughout most of the State, but the principal section is located near Los Angeles. The size of the light circles as compared with the dark ones shows that the production of citrus fruits will be materially increased as these young orchards come into bearing.

nando Valley, Ventura, Santa Barbara, Orange, Los Angeles, Riverside, and San Bernardino Counties and the southwest portion of San Diego County are important lemon producing sections. (See fig. 1.)

As early as 1883, an orange orchard was planted in Tulare County, north of the Tehachapi Range of the Sierra Madre Mountains. (*4*)[1] The production of oranges has grown to an important industry in Tulare County, especially in the vicinity of Porterville, Lindsay, and Exeter. The normal annual production for the county is now approximately 6,000 cars. At the same time, an important lemon section has developed about Lemon Cove. Less important orange districts are found in Kern, Fresno, and Butte Counties.

EARLY HISTORY.

Citrus fruits were introduced into California by the Franciscan monks who emigrated from Lower California in 1769. Twenty-one missions were established, and it is said that all but three of these had gardens and orchards. (*4*) A few orange trees were included in all these plantings, but none of them for commercial purposes.

The development of orange-growing in California centers around the San Gabriel Mission which was established in 1771, near what is now the city of Los Angeles. An orchard of about 400 orange trees was planted, probably in 1804. For several years no other plantings of any size were made. The mission orchard gradually fell into decay. General Fremont visited California in 1846, and later wrote that "little remains of the orchards that were kept in high cultivation at the missions." (*4*)

It is reported, however, that the second orange orchard in the State, consisting of 35 trees transplanted from the orchard of the San Gabriel Mission, was set out in 1834. (*9*) The first commercial orchard was planted in 1841 by William Wolfskill at Los Angeles. After some years of discouragement, it yielded its owner large profits, some years giving him an income of $1,000 per acre. (*9*)

In 1862 there were about 25,000 orange trees in the State, two-thirds of which were in the Wolfskill orchard. Other orchards were planted during the sixties and seventies, and by 1880 the number of orange trees in the State is given by Spalding (*9*) as 1,250,000, of which approximately one-fourth were in bearing. By 1882, according to the same authority, the number of bearing trees had increased to half a million.

Two factors were conducive to the rapid growth of the industry during the late seventies and early eighties. In the first place, the development of transportation facilities made it possible to ship fruit to eastern markets. Good returns were received for these shipments. Secondly, the Washington Navel orange, introduced by the Department of Agriculture from Brazil in 1870 and planted a few years later at Riverside, Calif., was found to be peculiarly adapted to California conditions, and to produce fruit which was large, well-colored, of good flavor, and good keeping quality. The large commercial development of the California orange industry really began with the introduction of the navel orange. Riverside, where the navel orange was first successfully grown, soon became the center of the orange industry, a position which it maintained for many years.

[1] Figures in italic refer to Literature Cited at end of this bulletin.

The commercial development of orange production in California therefore began about 1880. From January 1 to July 1, 1883, it is estimated that 151,450 boxes of oranges were shipped from the State (*9*) and approximately 50,000 boxes from July 1 to December 31.

By the season of 1892–93, the first year oranges were shipped by cooperative associations, shipments had increased to 5,936 cars of oranges and lemons. (*4*)

Accounts of the early history of citrus growing in California are silent for the most part with regard to lemons, which now make up approximately 20 per cent of all citrus shipments. The lemon is of equal antiquity with the orange, and was undoubtedly introduced by the Mission Fathers at the same time as the orange. Its commercial development was much slower, however. The report of the surveyor-general of California for the fiscal year, 1881–82, gives the number of bearing lemon trees in the State as 62,130. According to the same report, there were 484,227 bearing orange trees in the State at that time. "Of this total, 48,350 bearing lemon trees and 450,125 bearing orange trees were in Los Angeles County." (*9*)

High prices for oranges for many years directed the attention of the growers away from lemons. The additional care required to prepare the lemon for market also lowered it in favor. Improved methods of handling and curing lemons were developed, however; and as orange production and shipments increased so that extremely high profits were no longer the rule, attention was given to lemon culture. Certain sections of the State were found to be especially adapted to the production of the lemon, and planting during the nineties received considerable impetus in San Diego, Ventura, Santa Barbara, and Tulare Counties. In 1900–1 the returns of the county assessors show that there were 3,132,785 bearing orange trees and 805,084 bearing lemon trees in the State. (*4*) These figures probably under state the total. Reports for the year ending August 31, 1921, give the total citrus shipments from California for the period as 56,895 carloads, of which 45,236 carloads were oranges and grapefruit and 11,659 carloads were lemons. (*6*) (See fig. 2.)

DEVELOPMENT OF THE EXCHANGE SYSTEM.

The cooperative marketing of citrus fruit was undertaken in response to well-defined needs. The early period was one of experimentation, a cautious testing of methods and practices with, in some instances, inevitable mistakes and discontent. The men who organized the local associations and later federated these into the district and central organizations had no marketing plan to guide them. Neither were they directed by men outside the industry. They did the things immediately at hand, and as they gained in confidence and experience the scope of the organization was gradually enlarged.

The California Fruit Growers Exchange[2] is one of the foremost examples of successful cooperative marketing. Many recently organized cooperative associations of fruit and vegetable growers are

[2] This bulletin is based upon information which was collected through the cooperation and assistance of citrus-fruit growers, managers of associations and district exchanges, and officials of the sales, purchasing, and by-products organizations, which make up the exchange system.

Special acknowledgment is due to the general manager and department heads of the California Fruit Growers Exchange for detailed information and records furnished during the course of the investigation and for their prompt response to many requests for supplemental data.

modeled upon what is believed to be the exchange plan. At the same time, there is lack of understanding, outside of the California citrus district, as to the form of organization and operating methods of the exchange and the affiliated associations of which it is composed. Still less is known of the factors which have influenced its development,

Citrus shipments from California, 1887 to 1922 (for crop year ending September 30).

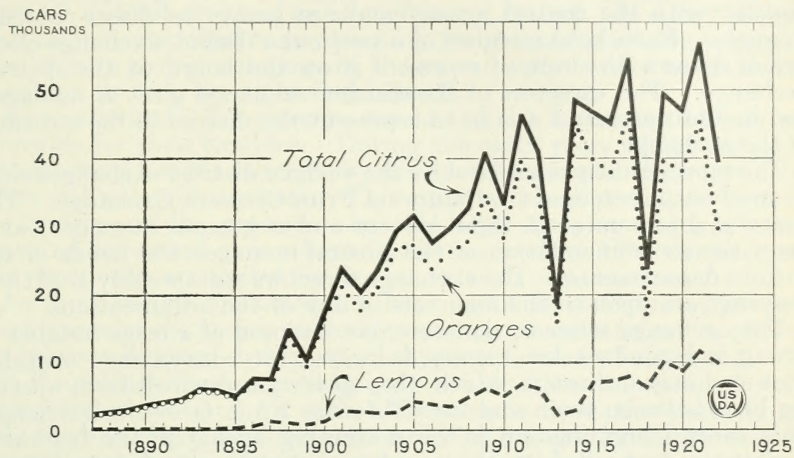


FIG. 2.—Both oranges and lemons are being grown and shipped in ever-increasing amounts from California. The greatest rapidity of increase occurred between 1895 and 1910, but shipments are still increasing at the rate of approximately 1,000 cars a year. The decline in shipments in 1913 was caused by a severe freeze the previous winter, the decline in 1918 by several days of extremely hot weather in June, 1917, which destroyed a large part of the orange crop of the 1917–18 season.

and of the problems and difficulties which have confronted the exchange members during the life of their organization.

This bulletin describes the organization and traces the development of the exchange system. The services which the organization has rendered the industry and the fundamentals upon which it is based are analyzed and discussed. The operation of the exchange and of its constituent locals is presented briefly. It is planned to present this feature in detail, together with a study of operating expenses and margins, in a later bulletin. The present bulletin will be of interest to students of cooperation generally, to officers and members of cooperative associations who may wish to analyze their own organizations in the light of the experiences of the exchange, and to producers and extension workers who may be interested in forming cooperative marketing associations.

The central marketing agency—the California Fruit Growers Exchange—is not the entire exchange system, nor indeed its most important unit. On February 1, 1923, the system was composed of 192[3] local packing units. A few of these are large individual shippers or commercial packing companies, but approximately 75 per cent are cooperative packing associations. These associations are controlled exclusively by their grower-members, and their directors are generally men of more than ordinary business ability. Several associations own property valued at $300,000 or more, and do a bus-

[3] In May, 1923, there were 192 associations or corporations affiliated with the exchange operating 212 packing houses.

iness of over $1,000,000 annually. As will be shown, they have solved, or have confronting them, important and difficult problems of finance and local management. The local associations, therefore, are strongly organized and their success is a matter of local pride.

Nearly all local associations, individual shippers, and packing companies are organized into 20 district exchanges. About 20 scattered local units, which do not fall into any sectional group, contract directly with the central agency and are known as direct-contract shippers. Each local member of a particular district exchange elects one of its own directors to represent it on the board of the district exchange. The directors of the district exchange elect a manager, and in addition select a man to represent the district in the meetings of the exchange.

The representatives selected by the various district exchanges elect themselves directors of the California Fruit Growers Exchange. The board of directors elect their officers and a general manager; and, upon the recommendation of the general manager, the heads of the various departments. The exchange directors meet weekly, and their meetings are open to the members of any of the organizations.

The exchange system, therefore, is composed of a large number of strong independent local units, federated for convenience into district exchanges, through which they govern and which form operating links between them and the California Fruit Growers Exchange. This central organization is the marketing agency of the federated local units, controlled by them and operated to correlate and interpret their policies and activities.

Distinct from and independent of their marketing agency, the federated associations have created a purchasing organization, known as the Fruit Growers Supply Co. Similarly, the Exchange Orange Products Co. and the Exchange Lemon Products Co. are owned and controlled by the associations. These companies are organized for the manufacture of by-products from cull oranges and lemons.

NEED OF ORGANIZATION.

The first carload of oranges was shipped from California in 1877. (*2*) Within 10 years shipments had increased to 2,200 cars. For the season of 1889–90, shipments of oranges were 3,476 cars. This was a startlingly rapid increase in the commercial production of a special crop; for during this period oranges were a luxury to the average family, and were purchased only at Thanksgiving, or Christmas or on other special occasions. Throughout the early eighties, however, even this restricted demand was sufficient to consume the entire crop at profitable prices. About the time that shipments passed the 2,000-car mark, supply began to outstrip demand.

To this natural difficulty of overproduction within the limits of the established demand was added the problem of slow transportation and poor refrigeration facilities. The development of the refrigerator car for the transportation of perishable products was still in its infancy and many improvements in equipment and service were needed. The railroads, did not give the attention to the rapid movement of California citrus fruit in through trains that is now an accepted part of their service. Deterioration and decay of the fruit in transit resulted. This loss did not appear serious when prices were high,

perhaps it was considered an inevitable transportation risk, but with a diminished demand it began to assume serious proportions. Buyers demanded better quality and freedom from decay, and loss in transit sometimes wiped out the small margin remaining to the grower.

The result was a series of disastrous seasons. The situation became most acute from 1890 to 1893. These are commonly referred to as "red ink" years; that is, returns were often made to the grower in the form of a debit written, as is customary, in red. In other words, many shipments failed to pay packing, freight, and marketing charges. The larger a grower's shipments, the more deeply in debt to the dealer handling his crop he might find himself.

As was natural, the growers considered the marketing system responsible for their troubles. During the early years of the industry oranges were bought outright by dealers who shipped them to wholesalers in the larger markets. This system proved profitable both to the dealers and the growers. Several large shipping and marketing concerns developed in southern California, and by 1890 the business was practically controlled by five or six such organizations.

As the demand slackened the business of these concerns became more speculative, losses were more common, and the prices offered the growers dropped below what they considered a fair return. In fact, if conditions were especially unfavorable, it was impossible for the grower to sell his crop for cash. These same firms, therefore, developed the business of packing and marketing oranges for the growers on a commission basis. This was also unsatisfactory, and often resulted in "red ink" returns. Moreover, some growers shipped their fruits to eastern commission merchants on consignment. Poor results were generally obtained from this system. Markets were glutted in many cases, decay was common, and fruit often sold for less than freight charges.

Although, then as now, most of the commission firms were reliable, some unreliable concerns actively solicited business. A grower, without experience in shipping fruit, was likely to be misguided by the inducements of firms of this class. Once his fruit was in the hands of the commission merchant, the grower was absolutely dependent upon the merchant's integrity for fair treatment. It was a comparatively simple matter for a dishonest merchant to manipulate the date of sale so as to make it appear that the fruit had sold on a low market or to misrepresent the condition of the shipment, and no doubt growers were often defrauded in this manner. However, the unfavorable conditions existing were not due entirely to chicanery on the part of the dealers, but to fundamental weaknesses in the marketing system.

Similarly, the so-called buyers' trust has been given undue prominence as a cause of the failure of the growers to make reasonable profits during this period. It was claimed that the firms buying and shipping fruit in southern California agreed to divide the territory between them, and that, if more than one firm bid for a grower's fruit, the offers were suspiciously similar. (*2*) The buyers' trust, however, if such a combination actually existed, was an effect rather than a cause of existing conditions. When the supply of oranges exceeded the demand it is possible that agreements between the buyers with regard to price or territory might have been entered into in isolated instances; but, so long as the demand for citrus fruit continued

active, competition among the buyers was keen, and it seems impossible that any agreement to divide the territory could have been maintained. Probably the fairest statement is that the buyers were as helpless as the growers in the face of market conditions which they could not control.

FAILURE OF THE MARKETING SYSTEM.

There were two important weaknesses in the marketing system: First, the marketing of the crop was in the hands of a number of shippers. No single buyer or shipper could maintain efficient market connections, nor have any means of knowing how many cars were being shipped by other shippers to a particular market. As a result, glutted markets were very common. The buyers and shippers also seem to have adopted the short-sighted policy of engaging in price-cutting wars for the purpose of driving their competitors out of certain markets. (*1*) The fruit was distributed in a haphazard way and little attempt was made to regulate shipments with relation to demand.

In the second place, no systematic attempt was made to develop a market for citrus fruit in the smaller cities and towns. These markets, in so far as they received supplies at all, received them irregularly and after they had passed through the hands of one or more wholesalers in the terminal markets. Consequently, local freight and added handling charges made prices to consumers unduly high in the small markets. In addition, the uncertainty of the supply offered no inducement to retailers to push the sale of citrus fruits and in effect placed oranges in the class of an occasional luxury. Furthermore, although there were many markets in the United States that could consume 1 carload of oranges a week, these markets would become overstocked if 2 cars arrived the same week.

There was, therefore, an immense undeveloped market for citrus fruit[4] awaiting only intelligent and controlled distribution to make it available to the growers. Although this market might have been developed in time by the dealers, the chances are that it would have been done much more slowly and imperfectly. A middleman works through established trade channels. It is not to his interest to institute experiments or innovations, because he has everything to lose from the failure of an experiment in distribution and little to gain from its success. So long as he receives the daily or weekly supplies which he can distribute at a reasonable profit, it makes little difference to him whether the product is marketed at prices satisfactory to the grower or whether the channels through which it reaches the consumer are the most direct and economical. In other words, his attention is naturally focused on a single link in the marketing chain, and it is only when curtailment of his supplies becomes a reality that he may be expected to devote any attention to the grower's problems.

It required, in this case, the organized efforts of the growers—the men who must market, not a relatively small portion, but the entire crop, at a profit, and who pay the cost of faulty distribution—to effect the necessary improvements.

[4] According to the eleventh (1890) census of the United States, cities and towns with a population of from 1,000 to 100,000 had a total population of 16,410,483 in 1890, while cities with a population of over 100,000 totaled 9,697,960 inhabitants.

ORGANIZATION OF THE COOPERATIVE ASSOCIATIONS.

The organization of the Orange Growers' Protective Union in 1885 was the earliest attempt to unite the citrus growers for the purpose of marketing their fruit. The union was formed with a capital stock of $100,000, divided into 20,000 shares of $5 each.[5] The members of the union arranged to have their fruit packed by commercial packers and turned over to dealers for sale or consigned to commission companies. The Riverside district, the most important shipping section, refused to cooperate under this plan.[6] The union did not own or operate packing houses and seems never to have been firmly established. The purposes of the union were to secure a better control of the market and a more equitable distribution of supplies. However, its form of organization was not calculated to insure success, since in effect it did not control either the packing or the marketing of the fruit of its members. It was also bitterly attacked by the speculative shippers, and was forced to suspend operations after two or three seasons. During this time at least one assessment of 10 per cent was made to maintain the organization. The union was revived in 1890 and finally disbanded in 1893.[7]

Other organizations of citrus fruit growers were the Fruit Growers Union of Southern California, organized in January, 1891, the Riverside Orange Trust, incorporated in December, 1891, and the Riverside Orange Growers and Packers Protective Association, which operated during the season of 1891–92 and part of 1892–93. (*5*) Each of the organizations represented an attempt to unite the interests of growers and dealers. Such a union was found to be impractical and all of these organizations failed after brief careers. All of the organizations apparently operated through dealers, who were not truly cooperative as they often bought fruit from growers outside the organization. This was done usually to make up a carload for shipment.[8]

At least two associations, strictly cooperative in character, operated during the season of 1892–93. One of these, the Pachappa Orange Growers Association, was organized at Riverside; and the other, the Claremont California Fruit Growers Association, now the Indian Hill Citrus Association, near Claremont. About the same time the Redlands Orange Growers Association was organized at Redlands. This association never affiliated with the exchange, but has operated for 30 years as an independent local unit. The Pachappa and Claremont associations became part of the exchange system.

The first president of Claremont California Fruit Growers Association, P. J. Dreher, has made the following statement regarding the organization:

> The history of the present system of marketing citrus fruits by cooperative growers organizations must, therefore, begin with the season of 1892–93 (one year before the exchange was organized) at Claremont. Here the first cooperative organization for direct marketing, The Claremont California Fruit Growers Association, was organized and handled the crop of its 11 members, which consisted of 21 cars that season.

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[5] From a stock certificate of the union in the possession of P. J. Dreher, Long Beach, Calif.
[6] Interview with P. J. Dreher, formerly president of the California Fruit Growers Exchange.
[7] Interview with P. J. Dreher, September, 1922.
[8] Interview with B. A. Woodford, formerly general manager of the California Fruit Growers Exchange, Sept. 12, 1922.

No record is found of any organization up to this time doing its packing and marketing, except through local packers and brokers. This organization saw the necessity of breaking away from this system, dispensing with the toll and profit exacted by the packers and shippers, and conducting its business with the jobbing trade direct, or through brokers residing in the eastern cities; thus securing some adequate returns from the shipments, and a fair part of the proceeds from the sales. Three methods were adopted by them at this time: One to sell at auction through eastern brokers; another to deal direct with the trade allowing them a brokerage; and the third to export. (*3*)

ORGANIZATION OF THE EXCHANGES.

At a meeting of about 60 orange growers held in the Chamber of Commerce, Los Angeles, April 4, 1893, definite action was taken for the organization of a system of cooperative marketing, based upon the principles adopted by the Claremont and Pachappa associations. A committee was appointed which, in a report made about 10 days later, submitted a plan for adoption by the growers.

The committee recommended the formation of eight districts and the organization of local associations within each district. Each association should establish a local brand and do its own packing. Further fundamentals with regard to local organization and operation were specified by the committee and it was recommended that a central business office be established in each district. Furthermore, an executive committee for southern California, made up of one member from each district, should have charge of matters affecting all the districts.

During the summer of 1893, district and local associations were organized. At a meeting held in Los Angeles, August 29, 1893, delegates from the local associations formed up to that time approved a plan of organization for the associations, the district exchanges, and the executive board. (See Appendix, p. 49.)

The organization thus formed operated during the seasons of 1893–94 and 1894–95. In a circular issued to the trade in December, 1894, the executive board of the exchanges stated that the exchanges positively controlled four-fifths of the orange crop of southern California. This circular also stated:

> Our purpose will be to establish confidence between the legitimate trade and ourselves, countenancing no speculative deals, and operating on lines whereby our fruit can be placed before the consumers at the least possible cost consistent with practical business methods.

Estimated shipments by districts for the 1894–95 season totaled 4,190 carloads, or 89.4 per cent of the actual total orange shipments for the season. One year later, at the beginning of the 1895–96 season, the estimate of exchange shipments was 2,574 cars, or only 36.7 per cent of the actual total orange shipments for the year. Mr. Woodford (*10*) is authority for the statement that at one time, exchange shipments were but 20 per cent of the total.

The decline in percentage of the crop handled by the exchanges may be accounted for, in part, by the growth of the industry, and the development of new and unorganized producing sections. This factor, however, explains only a small fraction of the loss. There was an increase in shipments from 5,871 cars of oranges in 1892–93 and 4,678 cars in 1894–95 to 7,010 cars in 1895–96. (See Table 2.) There was, however, a decrease of over 1,600 cars in the estimates of exchange shipments in spite of the increase in production. Actual shipments showed a still further decrease.

A still further reason for the loss in membership may be found in a very natural reaction from the enthusiasm with which the organization was started. The exchange system did not immediately revolutionize the marketing of citrus fruit. Furthermore, the growers were inexperienced in handling their own business, inexperienced local managers were employed in some instances, and many mistakes were made, some of them resulting in serious losses to the associations and their members. There was considerable decay in transit and many rejections by buyers during the first seasons. Many eastern dealers were accused of unfair practices by the exchanges and a number were placed on a blacklist. Considerable complaint was made that certain exchanges continued to deal with jobbers who had been blacklisted for unfair practices by other exchanges. Entire harmony among the exchanges was lacking, and there was not complete confidence in the executive board.

A number of resolutions of a condemnatory nature were addressed to the executive board at this time. In October, 1894, the Semi Tropic Exchange withdrew from the system because it disapproved, among other things, of the marketing plan proposed. The Orange County Exchange threatened to withdraw at this time. These exchanges were later pacified, and the Semi Tropic Exchange returned to the organization in December of that year. The Semi Tropic Exchange objected to the employment of a salaried eastern agent, but its chief objection was to a proposal to make the voting power of the exchanges proportional to the fruit shipped by each.[9]

Considerable conflict and confusion resulted from the fact that each exchange made its own sales. Although the executive board was supposed to act as a clearing house for market information, apparently it was not always fully advised by the exchanges as to their shipments and sales. As a result, no exchange had full information regarding the operations of the others and all of the exchanges were competing in the eastern markets. It became manifest that the fruit could not be scientifically distributed and marketed in that manner, and it also became apparent that the executive board must have more authority with regard to sales. The general plan of selling through brokers and direct to dealers was also found to be unsatisfactory.

THE SOUTHERN CALIFORNIA FRUIT EXCHANGE.

A proposal was made in the summer of 1895, therefore, that the portion of the original plan (see Appendix, p. 49) relating to the establishment of branch houses in the important markets be put into operation. This plan was approved by all exchanges. As a part of this plan the Southern California Fruit Exchange was organized and incorporated. The first directors' meeting of this organization was held on November 1, 1895, and the functions of the executive board were assumed by the exchange.[10] A number of agents were appointed to represent the exchange in the eastern markets.

With the incorporation of the Southern California Fruit Exchange, the cooperative marketing of citrus fruit became established on a reasonably secure basis. The history of the system has been one of steady growth since that time, both in quantity of shipments and in

[9] Minutes of the executive board of the Southern California Fruit Exchanges.
[10] Minutes of the Southern California Fruit Exchange, 1895.

the percentage of the total crop handled through the organization. The stability of the exchange was threatened, but not overturned by the failure of the California Fruit Agency in 1904.

THE CALIFORNIA FRUIT AGENCY.

The Southern California Fruit Exchange gradually became stronger until, in 1903, it controlled approximately 43 per cent of the citrus shipments from California. Shipments were large during the 1902-3 season, the fruit ran to large sizes, and there was considerable decay in transit. As a result, markets were demoralized and the outlook appeared very unfavorable. The proposal was made to combine the exchange and the principal commercial shippers into a single selling agency which would control practically 90 per cent of the crop, "and thus eliminate 'cut throat' methods, the playing of one firm against another by brokers to force down prices, and the excessive marketing expense due to useless wiring and the duplicating of agents." The agency (*5*) which began operation April 1, 1903, comprised the Southern California Fruit Exchange and the California Citrus Union which had been organized by the commercial shippers.

Although this agency met with some success in relieving the immediate situation, it soon became apparent that the two groups could not work together harmoniously. Conditions the following year were very bad, and for a time the exchange was threatened with disruption. The agency agreement was dissolved September 1, 1904.

This attempt to combine growers and dealers in a single organization illustrates strikingly the dangers inherent in such a union. The formation of the agency has been described as "a sincere yet unsuccessful attempt to combine the growers and shippers into one organization for the benefit of the entire citrus industry." (*5*) In retrospect it appears a direct denial of the principles upon which the exchange was established, and the movement never had the united support of the rank and file of the exchange. Although the agency began business on April 1, 1903, copies of the agreement between the California Citrus Union and the Southern California Fruit Exchange were not sent to the district exchanges for ratification until May 15. Not all district exchanges had ratified the agreement the following September. It was never ratified by the San Bernardino County Fruit Exchange, which filed notice of withdrawal from the exchange on this account on September 1, 1903.[11] The previous July this exchange had addressed a resolution to the Southern California Fruit Exchange which read in part as follows:

> Be it resolved that we hereby respectfully request that the Southern California Fruit Exchange quickly return to those sure principles upon which the organization that has done so much for the citrus industry of California was based; that no alliance be made or recognized which involves repudiation of contracts, or discrimination against loyal members of the Exchange or the adoption of methods proven to be false.
>
> That only such alliance be made as the management and rank and file of the Exchange shall judge to be for the best interests of the industry and just to all.
>
> All this to the end that the integrity and harmony of the Exchange may be maintained and their beneficent influence be perpetuated.

Three principal reasons for the failure of the scheme have been given by Mr. Woodford, who became general manager of the exchange

[11] Minutes of the board of directors, Southern California Fruit Exchange.

upon the dissolution of the agency: (1) Diverse interests of the two parties to the agreement; (2) arbitrary sales methods which antagonized the trade; (3) a cut-price war with independent brokers in the Iowa territory.[12] There was also a provision in the agreement which prohibited any increase in the membership of the association except under the regulation of a joint committee of the exchange and the citrus union. This provision was made to insure the independent operators a sufficient supply of fruit to carry on their business, but it was undoubtedly the primary cause of dissatisfaction among the associations, and it was also distasteful to independent growers to have this committee determine the packing and marketing channel they should employ.

The antagonism of the trade and the price-cutting war mentioned by Mr. Woodford were important causes of the low prices received in 1903–4. During this season, exchange shippers seem to have fared better than those in the citrus union, owing to the lower packing and marketing costs and the protection of the pooling system through the exchange. Several instances of these differences have been quoted. Mr. Dreher has mentioned the case of two neighbors in the Pomona district shipping from groves identical in size and practically identical in yield. The exchange shipper received 77 cents a box net for his fruit, while his neighbor, shipping through the citrus union, received a bill of $68 for packing, transportation, and marketing charges, which returns from the fruit had not been sufficient to pay.[13]

Poor returns were undoubtedly the immediate cause of the dissolution of the agency, although friction between the officials of the two contracting organizations was also an important factor. The dissatisfaction of exchange members, however, preceded low prices for their fruit, and it is doubtful if they would have become reconciled to the agreement even under favorable market conditions.

The agreement was entered into by the exchange directors in an attempt to meet a threatened emergency. For this reason local units were not generally consulted, and the agency was formed in a manner that did violence to the principle of local democratic control upon which the exchange was founded. Its failure emphasized the importance of such control and made the domination of the locals more secure.

THE CALIFORNIA FRUIT GROWERS EXCHANGE.

One year after the dissolution of the agency, the exchange adopted the name of the California Fruit Growers Exchange. On account of the development of the citrus industry in Tulare and other northern counties, the old name, Southern California Fruit Exchange, was no longer representative.

The California Fruit Growers Exchange has steadily increased its membership since organization. Shipments through this exchange have increased from 14,000 cars to over 40,000 cars and a percentage of the crops handled from 45 per cent to between 70 and 75 per cent. (See figs. 3 and 4.) During the same time the exchange has strengthened its organization and extended its usefulness to the growers. This developement is exemplified by the organization of the United Fruit Supply Co., and the two by-products companies,

[12] Interview, Sept. 12, 1922.
[13] Interview with P. J. Dreher, September, 1922.

the introduction of national advertising, the various activities of the field department, and the extension of the work of the traffic department. Preceding these activities in time of origin, however, was a very general improvement in handling practices which was the result of investigation initiated by the United States Department of Agriculture. These factors are discussed in detail in a succeeding section.

Carloads of Oranges and Lemons shipped from California and portion marketed by the California Fruit Growers Exchange. [Three-year moving average.]

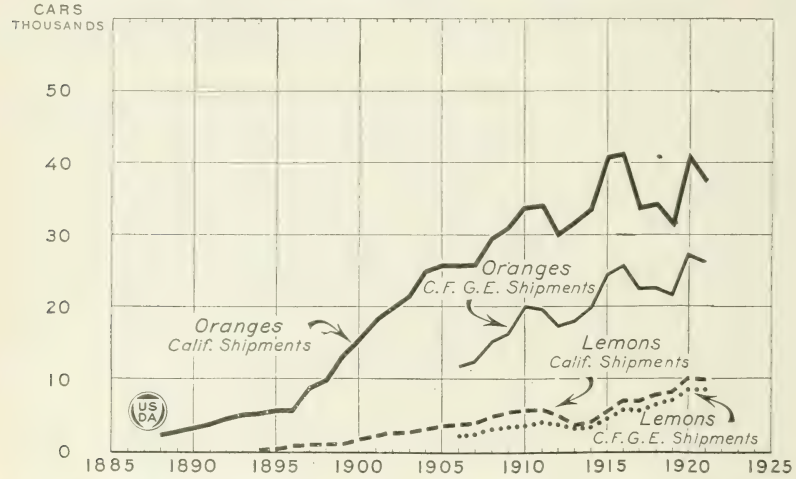

FIG. 3.—Exchange shipments have increased faster than shipments from the State, so that the percentage handled of both lemons and oranges has gradually increased. The exchange now controls 85 per cent of the lemons and 70 per cent of the oranges. Figures for lemons and oranges separately are not available previous to 1906.

Percentage of Citrus Fruit Marketed Through the California Fruit Growers Exchange.

FIG. 4.—Enthusiasm ran high when the exchange system was first organized in 1893. The Southern California Fruit Exchanges, controlled 90 per cent of the crop. But the mistake of managers, inexperienced in the highly technical processes of packing and marketing, the competition of established traders, and the lack of cohesiveness of the newly organized growers resulted in the loss of business until the exchange controlled only one-fifth of the citrus fruit of the State. With increasing experience, the organization was placed on a sounder basis and the percentage of shipments steadily increased.

THE LOCAL UNITS.

The California Fruit Growers Exchange is at present (May 1, 1923) made up of 192 local packing units. Approximately 75 per cent of these are cooperative associations of citrus growers, incorporated with boards of directors for business purposes. Some large producers, individuals and corporations, pack the fruit from their orchards through their own privately-owned packing houses. In addition, commercial packing companies grade and pack the fruit of individual growers at a fixed charge per box. A number of these concerns, as well as producers owning large orchards and operating their own packing houses, are members of the exchange and have the same status as the associations.

Local cooperative associations are the foundation of the exchange system. The earliest organization of this kind preceded the incorporation of the exchange by almost three years. They were created by the members of a community who considered their marketing problems as being, first of all, local in character.

The associations harvest the fruit of their members and prepare it for market. Frequently the fruit is hauled from the orchards to to the packing house in association motor trucks. Some associations preform certain cultural services for their members, such as pruning or fumigating orchards.

The fruit is picked by association crews under the direction of a field foreman. Mexican labor is employed for the most part, although Japanese and Filipinos are also used to some extent. Americans, as a rule, accept this employent only as temporary work or to obtain experience which will fit them for more responsible positions in the industry. The picking of citrus fruit calls for careful supervision. There is the problem of holding harvesting expenses to a minimum; and, what is more important, the necessity of handling the fruit carefully throughout the operation. Oranges and lemons are easily injured and such injuries are productive sources of decay. To secure rapid and at the same time careful work many associations pay their pickers on a "quality-quantity" basis. Under this system a man's daily wage depends upon both the quantity of fruit which he picks and the absence of injuries to the fruit.

Association crews harvest oranges at a cost of 7 to 10 cents per box picked under present conditions, and lemons for 17 to 20 cents. Lemons are more expensive to pick than oranges, because it is necessary to go over the same tree several times during the year and select the fruit each time for both size and color. Picking costs for both lemons and oranges are nearly twice as high as they were five or six years ago, principally because of a higher wage scale. Investigations of the exchange indicate that on a packed-box basis the picking of oranges costs 13 cents and lemons 37 cents. The difference is caused by the loss through culling operations and, by shrinkage in curing.

When fruit is hauled from the orchard to the packing house in trucks owned by the association, the net cost for this service to the grower is usually 2½ to 3½ cents per field box hauled. Exchange investigations indicate that the average cost of hauling per packed box is 4½ cents for oranges and 5½ cents for lemons.

The packing of citrus fruit calls for a considerable investment in buildings and machinery. The investment of the associations studied,

FIG. 5.—Packing house of a local association.

in land, buildings, and equipment, ranged from $20,000 to $160,000 (fig. 5). A representative association has approximately $7,000 invested in land, $32,000 in buildings, and $25,000 in equipment, not including such supplies as box shook, paper wrappers, and nails, which must be renewed from year to year.

At the packing house the fruit is washed, dried in mechanical driers, and graded. Oranges pass on moving belts, or conveyors, through all these operations and are carried directly to mechanical sizers, where the various sizes are deposited in canvas bins. The fruit is wrapped and packed immediately. Lemons, on the other hand, are stored for weeks or months before being packed and shipped. The length of time the fruit must be stored depends upon its maturity at harvesting.

The average packing-house expense for the five-year period 1917 to 1922 was 55 cents per packed box for oranges and 90 cents for lemons. In both cases, direct material and labor constituted 78 per cent of the total cost of packing-house operations, and indirect charges 22 per cent. The cost of each item of expense per box was higher for lemons than for oranges because of the larger amount of labor required and the need for curing. Lemons can not be sized by machinery because of their irregular shape, and this makes necessary a greater proportionate use of hand labor. Then, too, lemons must be cured for several weeks, and the fruit must therefore be handled twice.

Packing expenses steadily increased between 1917 and 1921, for oranges from 37 to 73 cents per packed box, and for lemons from 70

cents to $1.10. The increased cost of handling was due principally to increased wages and higher costs of box shook and other supplies. Both of these items seem to have reached their peak during 1920 and 1921. Overhead charges show a slight decrease per box during the same period, partly as a result of the increased volume of shipments during that time.

After all expenses of packing and marketing were paid the grower received, on an average, $2.75 to $2.80 per packed box, for the period, for both oranges and lemons, before deduction of harvesting, hauling, and cultural expenses, and shrinkage. These averages may be somewhat misleading, however, unless the fact is taken into consideration that the averages of all the associations in any given year varied 50 to 60 per cent from the mean, associations within the same year varied more than 100 per cent, and payments for individual pools within associations show still wider variation.

Several associations that ship oranges operate precooling plants in which the fruit is reduced to an average temperature of approximately 40° F. before being loaded in iced refrigerator cars for shipment.

An association receives from the district exchange, of which it is a member, the returns for all fruit shipped, and distributes this money to its growers in proportion to the quantity and grade of fruit delivered by each. All shipments are made in pools which vary in length from two weeks or a month, under special conditions, to a year or season.

CAPITAL STOCK ASSOCIATIONS.

The membership of the local cooperative associations is made up entirely of citrus-fruit growers. The associations are usually organized as stock corporations, with the restriction clearly expressed in the by-laws that they shall be operated for the purpose of mutual service and not for profit. Only in rare instances does an association pay dividends or interest for the use of money invested in its stock.[14] As a rule, a certain number of shares is issued to each member for each acre of "bearing grove" that he owns. In some organizations the investment of the members in the stock of the association is as high as $125 per acre; in others it is $10 per acre or less. A representative figure is $50 per acre. In practically all cases the investment of each member is in proportion to the acreage of citrus fruit which he cultivates, or the quantity of fruit which he produces. If the stock of the association is not distributed on an acreage basis, one share may be issued for each 10 or 20 trees. In a few instances, the members subscribe for a certain number of shares per 100 boxes of fruit shipped, and the investment of each grower is maintained in proportion to his shipments by means of a revolving fund.[15]

In all capital stock associations, each member is required to sign a stock subscription agreement in which the method of payment is specified. The almost universal custom is to make deductions from

[14] Among some fifty associations which were carefully investigated, only one was found which paid dividends to stockholders. This association has since been reorganized, and is now on a nondividend basis.

[15] Often associations of this type deduct 5 or 10 cents per box from all returns for fruit. After a grower has completed the payments for his pro rata share of the stock of the association, he continues to pay these assessments and new stock certificates are issued to him. At the same time his oldest certificates are retired and he is paid their par value, so his investment is always in proportion to his shipments.

returns received for fruit delivered by the grower to the association. The usual amount deducted is 5 or 10 cents per box or per 100 pounds of fruit shipped. Some associations require a grower to pay for his stock in cash at the time he becomes a member, but as a general rule the investment per acre is comparatively low in associations in which this provision is in force. In other instances, the grower pays cash for one-fifth of his total subscription, and gives the association four interest-bearing notes, payable in 1, 2, 3, and 4 years.

Money paid by members for the stock of their association is a definite amount in all cases, except when stock is issued on the basis of the quantity of fruit shipped. Here, too, there is often a provision that the number of shares held by one member shall not exceed a specified number or amount per acre.

The ownership of stock does not necessarily constitute active membership in an association. The by-laws of most associations provide that the grower must sign a crop contract, or a copy of the by-laws containing certain provisions with regard to the marketing of his crop, before he can have any voice in the management of the organization. It has been attempted in some instances to make stock certificates appurtenant to the orchard property for which they were originally issued. This restriction, however, has not been upheld by the courts; and it has been necessary to solve the vexed question of stock ownership by nonproducers, at which the restriction was aimed, in other ways. The associations have accomplished this in a fairly satisfactory manner by the generally adopted provision that no dividends or interest shall be paid for money invested in the capital stock of the association, and that stockholders shall have no voice in the management of the enterprise unless the fruit grown upon the orchards represented by their stock shall be under contract to the association. The stock, therefore, has no value as an investment. A few associations, make periodical stock assessments largely for the purpose of inducing nonproducers or nonpatrons to dispose of stock they may hold.

A grower disposing of his property, therefore, usually sells his association stock to the purchaser of the orchard property. If he can not dispose of his stock in this way, he delivers the certificates to the secretary of the association who sells them to a new member or to a member who must have additional stock to cover orchard property just coming into bearing. These transactions are usually made at less than the par value of the stock. Nearly all associations, however, have a few shares of stock in the hands of individuals who are not active members. In many cases an individual holds his stock because he expects to become again an owner of grove property. Others merely neglect to dispose of their stock after withdrawing from the organization. This holding of stock by ex-members does not constitute a serious problem as a rule, although the association management prefers that all stock shall be in the hands of active members.

Each active member is entitled to one vote for each share of stock he owns, payments for which have been completed. As a matter of fact, members seldom vote according to shares, except in the case of the election of a board of directors, or in case there are irreconcilable differences of opinion with regard to policy. In the election of directors it is the custom in many organizations for the members by a viva voce vote to instruct the secretary to cast a single ballot for the men

nominated. In some associations, a vote by shares has not been taken for several years; in others the president may insist upon a share vote, although there is practical unanimity among the stockholders.

NONSTOCK ASSOCIATIONS.

Associations organized without capital stock in many instances differ little from those issuing stock certificates. The chief difference is that the by-laws of most membership associations provide that a member withdrawing from the organization shall have no equity in its assets. This is modified in some cases by the provision that the interest of a member, whose connection with the association is canceled by death or by expulsion, shall be equitably appraised and paid to the member or to his estate. The by-laws of certain associations provide that a man who withdraws from the association and is later reinstated shall be given credit for membership fees previously paid, while others specify that his status shall be that of a new member.

The membership fees of associations organized without capital stock are usually a specified sum. The fee compares in amount with the investment of the members of associations organized as stock companies. At least one membership association does not charge a membership fee, although its by-laws provide that such a fee may be charged whenever the board of directors deems it advisable. This association is one of the oldest in the State. It started in a small way and no great outlays of capital were necessary at any time. It has been entirely feasible, therefore, to finance the construction of the packing plant and the installation of machinery by a per-box building assessment. A few associations organized originally as membership corporations have reorganized as capital stock associations; and others, including the association just described, are contemplating such a change.

ADVANTAGES OF CAPITAL STOCK.

The advantages of the stock form of organization are largely financial. Many associations have investments in buildings, machinery, supplies, and the stock of subsidiary corporations ranging from $100,000 to $300,000. The interest of each member in the property of the association, therefore, amounts to a substantial sum. Under the nonstock form of organization, there is considerable uncertainty as to the equity of each member in the assets of the association. In some instances it is assumed that the interests of all the members are equal. This assumption has been the cause of dissatisfaction among growers with large orchards. These men have contributed more to the upbuilding of the association and to the purchase and maintenance of its property than have members whose orchards are small. Similarly, growers who have contributed to the support of their association for several years consider it unjust that a man who has been a member for a single season should have equal rights with themselves.

Against these objections it is argued that the amounts paid by each grower from year to year, whether as membership fees, to a building and maintenance fund, or to a reserve for depreciation, are really charges for the use of the facilities of the association. The fact remains, however, that buildings and other assets are accumulated by the organization in the course of its operations, and it is inevitable that the interests of each member in these assets should be a subject

of discussion. The issuance of stock certificates which can be readily transferred, when a member withdraws from his association, solves the problem in a satisfactory way.

As a general rule, also, associations organized with capital stock have a better credit rating than those organized on a membership basis. An association that has operated successfully for a number of years undoubtedly receives the same consideration from the local banks whether it is organized on a stock or nonstock basis; but the banks will consider more favorably loans to capital-stock organizations than to nonstock associations, if the success of the venture remains to be proven. This fact has prescribed to a certain extent the adoption of a stock form of organization.

OBLIGATIONS OF MEMBERS.

Nearly all associations adopt a uniform form of crop contract. (See Appendix, p. 56.) By the terms of this contract the grower agrees to deliver to the association all citrus fruit of the classes specified, grown upon his property, except what he may require for his own use. Provision is made for the payment of liquidated damages to the association in the event that the grower violates his contract. Twenty-five or fifty cents per box is the amount usually specified. In a few instances the members do not sign a special crop contract, but sign the by-laws which, in such cases, contain the essential clauses of the contract. Rather infrequently the grower does not sign either a crop contract or the by-laws, but is supposedly bound by by-law provisions as to the disposal of his crop.

A member of capital-stock associations, in addition, signs a stock-subscription agreement which specifies the number of shares for which he subscribes, and in most cases authorizes the association to deduct a certain amount per box or per 100 pounds from money due the grower for fruit shipped, until the stock has been paid for. Deductions from the returns, in amount sufficient to cover all ordinary expenses of the association and to create reserves, are provided for either in the crop contract or the by-laws, or the directors are given authority in the by-laws to authorize such deductions.

BY-LAWS.

The by-laws of the associations as a rule are simple in form and make such ordinary provisions as are common to all corporations. They fix the date of stockholders' meetings and provide rules for calling such meetings. They specify the number of directors and officers and their duties and powers. They usually specify the number of shares of the corporation that shall be issued for each acre of bearing orchard and fix the par value of such stock.

Provision is made for the withdrawal of members from the association. Members, in most instances, can withdraw during a certain month of the year, usually the month immediately preceding the annual meeting. In some instances the withdrawal period is shortened to 15 or even 10 days, but in all cases the privilege of withdrawing from the association is open to the members for a certain period during each year. As has been stated, the by-laws of a few associations contain sections which are in effect a crop contract between the association and the members. Nearly all provide for liquidated

damages in the event that the contract is breached, and all give the directors certain authority with regard to the amounts that shall be deducted from the returns received for the fruit of the members.

Provision for pooling the fruit of the members of an association is made either in the by-laws or in the contract between the members and the association. The period over which each pool shall extend is determined by the board of directors or by the members at the annual meeting. The directors determine the percentage of his total crop which each member shall contribute to the various pools. However, it is generally provided that this percentage shall be the member's pro rata share of the total amount of fruit to be delivered during that period. A member, at the discretion of the directors, may be excused from delivering fruit to a certain pool, but in that event he may be required to make up the deficiency during any other pooling period. Grading of the fruit is under the immediate control of the manager, and returns to members are made on the basis of the average price received for all fruit of the same variety and grade delivered to the packing house during the period of the pool.

DIRECTORS AND OFFICERS.

The association is governed by a board of five or seven directors. Weekly meetings of the directors are held during the active season, as a general rule, and monthly meetings at other times. The directors have full control of the management of the association, and elect the officers and a manager. The manager is responsible for the conduct of the business under the direction of the board of directors. The officers of the association consist of a president, a vice president, a secretary, and a treasurer. The president and vice president must be members of the board of directors. In most cases the manager also acts as secretary, while the treasurer may be an individual or a financial institution.

FINANCIAL POLICIES.

Money necessary to construct a packing house or to purchase machinery and supplies is secured, as a rule, by loans from local banks or banks in Los Angeles. Of a new association, the banks commonly require a trust deed to the packing house and real estate, along with the note of the corporation. In some cases a bank may require that the directors of the association indorse this note. In a few instances associations have financed packing-house construction or the construction of precooling plants by issuing bonds. This is feasible in the case of established associations which have assets other than the proposed building to assure the safety of the bond issue.

As a rule, a small assessment per box is made to retire indebtedness incurred through the construction of a packing plant, and in addition receipts from the sale of stock may be applied against this loan. A plan very commonly adopted in recent years is to have the "building and maintenance" or "indebtedness" assessments in the form of partial revolving funds. Thus, out of a total assessment of 5 cents per box for "building and maintenance," 2 cents may be applied directly to the payment of outstanding indebtedness, while the 3 cents remaining may be used for the same purpose with the understanding that this latter amount shall be credited to the growers

contributing. After the indebtedness is retired or reduced to a nominal amount, the same assessment is continued, and the entire amount, obtained through this assessment, or a portion of it, is used to retire the revolving fund; that is, to reimburse the growers who contributed an additional 3 cents per box to the fund. In this way the indebtedness of the association is retired in a reasonably short time; while the direct burden is distibuted over a number of years and is borne by growers entering the association some time after the packing house is constructed as well as by the original members.

Many associations are financed by loans from individuals in addition to money borrowed from the banks. One association is financed entirely by loans from its own members and a few friends or business associates of members.

INDIVIDUAL SHIPPERS.

A number of large growers operating their own packing houses are members of the California Fruit Growers Exchange, either through a direct contract with the exchange or through affiliation with one of the district exchanges. Such shippers may be individuals, or partnerships, but are usually corporations. The harvesting and packing of the fruit is conducted as part of the farming operation, although it is under the direction of a packing foreman, or, if the business is sufficiently large, of a packing-house manager. In their relations with the exchange such shippers have the same standing as a local association. If members of a district exchange, they are allowed representation on the board of directors on the same terms as the cooperative associations. It sometimes happens that such a shipper is elected by the district exchange to represent it on the board of directors of the California Fruit Growers Exchange.

Individual shippers differ from the packing companies in that they pack and ship, as a rule, only their own fruit. In some instances such a shipper may handle, as an accommodation, the fruit of one or two of his neighbors who wish to obtain the benefit of the exchange service and are not located within a convenient distance of a cooperative packing house.

PACKING COMPANIES.

There are several commercial companies, members of the California Fruit Growers Exchange, which are engaged in the business of packing oranges or lemons for a specified charge per box. The growers whose fruit is handled by such a company receive the benefit of the exchange marketing service. The agreement of a grower of this class is solely with the packing company, which undertakes to pack his fruit for a certain fixed price and to market it at cost or for a fixed amount per box.

The company contracts directly with the exchange or with a district exchange to market the fruit of its clients, and by so doing it obtains the status of an association; and, if a member of a district exchange, it is entitled to representation upon the board.

Companies of this kind, though of direct value to growers not in a financial position or not forming a sufficiently compact unit to organize an association, do not give the growers the full value of cooperative marketing. They do, however, give the grower the benefit of the exchange selling organization and the prestige of its adver-

tised brands, without the necessity of contributing to the support of an association or taking any part of the responsibility of managing a packing house. Possibly freedom from the latter responsibility plays an important part in maintaining such an arrangement. The packing company, as a matter of course, must be reimbursed for such expenses as an association would ordinarily incur, and must show its owners a fair profit.

A plan more nearly cooperative has been worked out by the exchange and put in operation by some companies. Under this plan, the company makes a charge for packing that covers the cost of labor and material. To this is added an arbitrary amount per box to cover interest, depreciation, general expenses, profit, etc. The growers participate in all marketing refunds which may be made by the central or the district exchanges.

THE DISTRICT EXCHANGES.

A few local organizations, approximately 20, affiliate directly with the California Fruit Growers Exchange. Most of these "direct-contract shippers" are located in sections that do not ship a sufficient quantity of fruit to maintain a district exchange. In one section an anomalous situation is presented: A group of closely affiliated individual shippers make up the district exchange, while three or four cooperative associations in the territory are direct-contract shippers. Inasmuch as the exchange directors are the representatives of the district exchanges, the direct-contract shippers are not represented on the board of directors. They are also subject to a charge of 1½ cents per box for the special service that the exchange gives through its direct contract. In all other respects their position is comparable to that of shippers affiliated with a district exchange. Locals affiliated with district exchanges find that it costs them on an average about 1 cent per box to support the district organizations, though a few districts have operated for as low as one-half cent, and one of them regularly for more than 2 cents.

STRUCTURE.

The members and stockholders of a district exchange are the associations, individual shippers, or packing companies affiliated to form such an exchange. As few as 2 local units may make up a district exchange, or there may be as many as 20 associations in the organization. From 10 to 12 is a common number, and 9 is an approximate average. Each local is represented on the board of the district exchange. The voting power of each is proportional to its share of the total expense of the district exchange, or to its percentage of the total number of cars shipped through the district exchange during the previous season. The capital stock of each district exchange is a nominal amount.

The directors of the district exchange elect officers, a manager, and frequently an assistant manager. They also elect a man, who may be a director or the manager, to represent the district exchange at the meetings of the California Fruit Growers Exchange. Such a representative, upon presentation of his credentials to the directors of the central exchange, is elected a member of its board.

MARKETING FUNCTIONS.

The district exchange is the sales agent of its members. In his capacity as sales agent for the shippers in his district, the district exchange manager apportions all orders from buyers that do not specify the pack of a particular shipper. He also gives billing and routing instructions for cars that are not shipped on order. The district manager is in constant touch with the sales and traffic departments of the exchange; and, acting on market information received through this source and his knowledge of the shipments from his district, he places a price upon the various grades of fruit in the several shipments from his district. If, for any reason, the shipment can not be sold at the price asked, neither the agent in the market nor the sales agent in the central office of the exchange is authorized to accept a lower price. The best offer received must be referred to the district exchange; and, usually after consultation with the association manager, the offer is either accepted or instructions are given by the district exchange to divert the car to another market.

The sales departments of the exchange deal directly with the 20 district-exchange managers. They are enabled, accordingly, to receive information regarding shipments, and to distribute market information more expeditiously than would be the case if they were obliged to keep in touch with all the 192 local units. As the district-exchange managers are in close touch with conditions in their district they are able to give the sales departments concise information regarding the quality and condition of the fruit shipped by their members.

The district exchanges withhold all charges made against the fruit for marketing or other purpose. A fixed "retain" per box is determined at the beginning of each season. This sum includes the estimated costs of the district exchange, the cost of maintaining the central exchange, including all branch offices, a fixed advertising charge, and the established assessment for stock in the Fruit Growers Supply Co. If a shipper[16] is a member of either the orange or lemon by-product companies the amount assessed for the purchase of the stock of these companies is also withheld from his returns. Periodically the district exchange distributes to the various central service organizations, the amount withheld for each, holding only its own assessment. At the end of the fiscal year the cost of operating the district exchange and the central exchange is determined, and any surplus is returned to the shippers in proportion to the amount contributed by each.

SERVICE ACTIVITIES.

In general, the service activities of the district exchanges are limited. The manager gives assistance to the associations in matters of organization and membership. Many associations have no desire to increase the number of their members because they think they already have all the fruit the packing-house facilities will care for properly. The district-exchange manager, however, takes a somewhat different attitude. Every additional car of fruit enables his office to operate at a lower cost per box and adds to the efficiency of

[16] "Shipper" refers in all cases to an association, individual shipper, or packing company.

the exchange system. The responsibilty for maintaining the membership of old associations and organizing new associations has formerly rested mainly upon the district-exchange manager. The recently organized Growers Service Bureau of the central exchange will cooperate with the district-exchange managers and the association managers in the future, and will assist in membership work.

At least one district exchange has made a concerted effort to improve the field and packing-house handling of the fruit of its members, and for that purpose employed an inspector to work in cooperation with the field department of the exchange. All district exchanges cooperate with the field department in its various activities, and concern themselves with the general questions relating to the improvement of the quality and grade of the fruit shipped from their respective districts.

Organization of the California Fruit Growers Exchange.

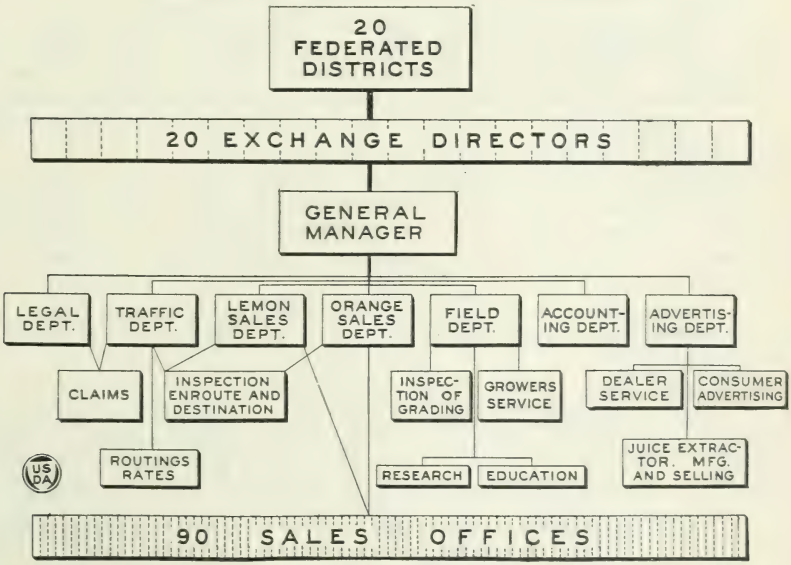

FIG. 6.—The California Fruit Growers Exchanges is composed of 20 district exchanges. The representatives of the district exchanges make up the board of directors of the exchange.

ORGANIZATION OF THE EXCHANGE.

The California Fruit Growers' Exchange is a nonstock corporation, organized under the laws of the State of California. (See fig. 6.) The representatives of the 20 district exchanges are the members of the California Fruit Growers Exchange.[17] They elect themselves directors of the exchange, and also have been elected the directors of the Fruit Growers Supply Co., which will be discussed later.

The operations of the exchange are financed by assessments of a specified sum per box on shipments made through the organization. As has been previously mentioned, this sum is retained by the dis-

[17] See provision in contract between the exchange and the district exchanges under section entitled "Board of Representatives," Appendix, p. 62.

trict exchanges and is paid by them to the exchange at specified periods. Direct-contract shippers pay their marketing charge directly to the exchange. At the end of the fiscal year, any sum remaining after the expenses of the exchange are paid is returned to the district exchanges or the direct-contract shippers.

The directors of the exchange elect the officers of the exchange and a general manager. The exchange directors meet weekly in the Los Angeles office. The directors' meetings are attended regularly by a considerable number of growers, association managers, and others interested in the citrus industry. Executive sessions are an exception. The fact that the meetings of the exchange directors are open to everyone connected with the industry has created a very favorable impression throughout the industry, and the sentiment which it has inspired is no doubt a considerable factor in the strength of the organization. The business of the meeting consists, as a rule, of the consideration of routine matters pertaining to the operation of the exchange, of special business brought to the consideration of the directors by the general manager, and reports from heads of departments. The lemon and orange sales agents always give reports on sales and market conditions, the number of cars en route to market, the number shipped the previous weeks, estimated shipments for the current week, and similar matters of interest.

The general manager is responsible for the policies of the exchange and supervises the work of the various departments. Although any important change in policy is subject to approval by the board of directors, it is the duty of the manager to initiate such policies and make the necessary recommendations to the board. The duties and powers of the general manager, therefore, do not differ in their scope and authority from that of the manager of any representative industrial corporation.

The cost per box for all the central-exchange activities averaged 5 to 7 cents from 1896 to 1913. Expenses have gradually increased since then as the exchange has rendered additional services and spent more in advertising. In 1920 the net expense per packed box was 5.4 cents for sales service and 3.3 cents additional for advertising; in 1921, 5.8 cents for sales service and 4 cents for advertising; and in 1922, 7.8 cents for sales service and 4.2 cents for advertising. The high figure in 1922 was due to the small volume handled. The total annual expenses of the exchange were between $500,000 and $750,000 annually from 1910 to 1914. Between 1920 and 1922 total expenses for each 12-month period increased to $1,500,000 or more. Advertising and the maintenance of the selling organization each accounted for about 40 per cent of the total expenses. The exchange assessment is reduced nearly 1 cent a box by an arrangement with the California Fruit Exchange, a cooperative deciduous-fruit selling organization, allowing the joint use of exchange facilities on the markets during the deciduous fruit season. During this period shipments of citrus fruit are comparatively small.

THE ORANGE AND LEMON SALES DEPARTMENTS.

The orange sales department handles the sale of oranges, grapefruit, and tangerines. This department is in close touch at all times with the managers of the district exchanges, with the direct contract

shippers, and with the salesmen and brokers who represent the exchange in the various markets. The lemon sales department in the same way handles the sales of lemons, and stands in the same relation to the shippers and the market salesmen as does the orange sales department. Each department is in charge of a sales agent.

PERSONNEL.

The personnel of the direct sales facilities of the exchange consists of the orange sales agent and the lemon sales agent in the Los Angeles office with their assistants, 6 division managers in the larger markets with their office staff and assistants, and 46 additional district agents. This makes a total of 52 sales offices in the markets of the United States and Canada under the direction of men exclusively in the employ of the exchange, June, 1923.

The division managers have supervision of the personnel of the the district agencies in their territory, but in so far as its relations with the exchange are concerned each district office is an independent unit. The division manager, however, is the key man in his territory, and is consulted as to the general sales policy, the opening of additional district offices, changes in the staff, and similar questions.

In addition to these salaried agents, the exchange deals directly with brokers in 8 markets of considerable size and has brokerage representation in 25 of the smaller cities, with whom it deals through the district agent in the territory.

SALES METHODS.

The keynote of the exchange sales policy is the equable distribution of supplies. This means not only that every carlot market in the country shall be supplied with that quantity of oranges and lemons which it can consume from day to day or from week to week, but also that the entire crop shall be distributed over the shipping season in such a manner as to satisfy consumer demand and to avoid an oversupply at one period and shortages at other times. The total supply is fixed by natural conditions, and can not be increased or decreased by any of the agencies engaged in production or marketing. Given a definite supply, therefore, the sales problems consist in distributing this supply throughout the season and over the market territory in such a way as to meet the maximum demand at all times.

Previous to the beginning of the season, the sales agent and general manager of the exchange visit each of the division offices in the eastern markets. A conference lasting two or three days is held with the division manager and the district agents in the territory. At this conference the results of the previous season are reviewed and plans are formed and facilities arranged for handling the new crop.

After the season is under way, the sales department of the exchange obtains each week from each district-exchange manager and each direct shipper an estimate of shipments for the week following. On the same day each market sales office reports the probable number of cars it can use for shipment during the following week. The sales department has in mind also the general distribution scheme, as outlined from estimates of the total crop. It may develop that estimated shipments are greater or less than the number of cars which it is

believed should be forwarded during that particular week for the best distribution of the total crop. On consultation with the district-exchange managers, shippers may be urged to increase or reduce their shipments, in order to distribute the shipments of each variety more satisfactorily over its full marketing period.

In actual practice many other factors will influence shipments, such as weather conditions in California, the maturity of the fruit, the car supply, and available labor. Plans must be revised from week to week and from day to day, as the reports received from the markets show changes in the demand or in the supplies of competitive fruits.

THE TRAFFIC DEPARTMENT.

The traffic department of the exchange advises the shippers regarding shipping conditions, freight rates, routes, car supply, embargoes, and such other general matters as affect the transportation of their products. A statement of the best routes to various markets is sent to each association and these are revised as conditions change. The traffic department schedules each shipment for the information of the sales department, indicating on the manifest of each car the day on which it is due to arrive at its destination.

During periods of car shortage, the traffic department takes active steps to insure their pro rata share of the available cars to the exchange shippers. This department checks all freight bills received from the railroads, and files a claim for the amount when an overcharge has been made.

Claims for loss and damage to shipments en route arising from the negligence of the railroads are an important feature, forming 80 to 90 per cent of all claims filed. Loss and damage claims have amounted to approximately $500,000 annually for the last five years. In perishable shipments, individual claims of this nature are relatively large and form a troublesome item. It is often difficult to fix responsibility for damage in transit, and a system of careful inspections at destination is required to protect the shipper. The policy of the exchange is to cooperate with the railroads to prevent claims and to present only such claims as are clearly justified.

THE ADVERTISING DEPARTMENT.

The apparent overproduction at the time the exchange was organized was met (1) by better methods of distribution and (2) by the creation of dependable merchantable qualities in the product through the establishment of standard grades and improvement in handling practices. By 1907, annual shipments through the exchange had increased to over 6,000,000 boxes, and totaled over 10,500,000 boxes four years later. It was necessary that further steps be taken to enlarge the market for California citrus fruit.

Advertising was begun in 1907 with an appropriation of $6,000 for a newspaper campaign in Iowa. The results of this campaign were closely watched and all indications pointed to the possibility of greatly increasing consumption through advertising. An appropriation of $26,000 was made the following year, and some display material was used.

The advertising appropriation has been increased to approximately $800,000 annually at the present time, which is about 0.8 per cent of the delivered value of the fruit. The advertising campaign has

centered around the "Sunkist" trade-mark of the exchange. Color advertisements stressing the delicious and healthful qualities of Sunkist oranges, and the varied uses of Sunkist lemons appear regularly in prominent, magazines.

All the chief mediums of advertising are employed in varying degrees, as seems best to accomplish the objectives of the exchange, (1) to increase the total consumption of oranges and lemons; (2) to stimulate a consumer and trade preference for the Sunkist brand of oranges and lemons; and (3) to reduce the cost of distribution by promoting with the trade, better displays, more rapid turnover of supplies, reasonable margins, and better merchandising generally.

Magazines, newpapers, posters, street-car advertising, and display material are used throughout the year to broadcast reasons and reminders for the greater use of oranges and lemons. Personal work is carried on with the retailers to enlist their cooperation and to supplement the general advertising program.

Personal contact with the retailer is made through "dealer service men" who call on retail grocers and fruit stores, distribute advertising matter and arrange displays of their fruit. These men cooperate with the retailers in promoting special sales in various cities. The "dealer service" activities of the exchange are based on a careful study of methods of retailing citrus fruit on a gross margin not exceeding 25 per cent. The retailers are shown that a reasonable margin of profit on each transaction has a stimulating effect upon sales, and results in increasing their total net profits through volume combined with rapid turnover.

THE FIELD DEPARTMENT.

The field department of the exchange is organized principally for the purpose of handling problems that arise in the production and harvesting and packing of the fruit. The work of the department is carried on under four bureaus, the first of which is concerned with the improvement of handling practices and maintenance of the standard of the "Sunkist" and "Red Ball" grades.[18] (See also appendix: Grade Specifications, p. 64.)

The "Sunkist" and "Red Ball" trade-marks are the property of the exchange; therefore the central organization is able to specify that only fruit of a certain quality can be shipped under these trade-marks. This standard is maintained by a force of inspectors under the direction of the field manager. The policy of the field department is to cooperate in all instances with the association managers, because with their cooperation grade standards can be maintained without much difficulty. During the shipping season, inspectors of the field department visit each exchange packing house practically every day.

In brief, the primary work of the field department is the improvement of all practices related to the harvesting, grading, and packing of the fruit with a view to giving the trade and consumers standardized, dependable products.

The field department also maintains a pest-control bureau and a research laboratory. The research laboratory investigates citrus by-products and by-product processes and machinery believed to be of value.

[18] "Red Ball" is a trade-mark used on the "choice" grades of oranges and lemons, while "Sunkist" can be used only for "extra choice" or higher grades.

A growers' service bureau is maintained, which is primarily a division created for the purpose of promoting the organization of new associations and strengthening existing locals. The bureau also investigates any dissatisfaction on the part of a member or members of the various locals, and endeavors to adjust misunderstandings and to correct deficiencies in service, whether on the part of the association, the district, or the exchange.

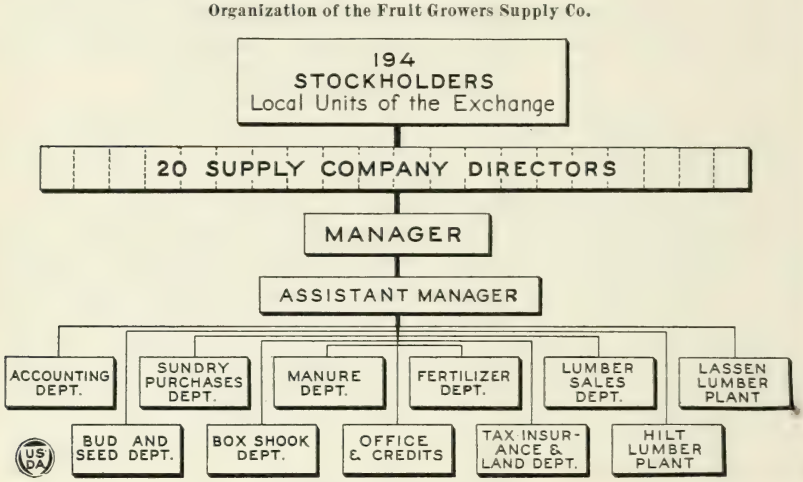

FIG. 7.—The stockholders of the Fruit Growers Supply Co. are the associations, individual shippers, and packing companies affiliated with the California Fruit Growers Exchange. The representatives of the 20 district exchanges are the directors of the supply company.

THE LAW DEPARTMENT.

The law department of the exchange handles all the legal problems arising in the course of its business, and represents the exchange in all suits that may ensue. Through the legal department the exchange directors are kept advised regarding all legislation and court decisions that may affect the citrus industry, and assistance in organization, in preparation of contracts, by-laws, and other legal forms, and in evolving sounder methods of financing their operations, is given to the associations.

The law department gives general assistance to cooperative organizations in other industries. It is the policy of the exchange to be helpful whenever possible to the cooperative movement in general among agricultural producers.

THE ACCOUNTING AND STATISTICAL DEPARTMENT.

To determine the factors influencing the marketing process and the margins of profit of the different groups of dealers in the trade, this department has made an investigation of prices and margins on citrus fruit in the principal cities where the exchange has representatives. This investigation has been continued regularly since 1913. With the aid of the data gathered, the exchange strives to influence the other factors in the marketing of citrus fruits toward better and more economical merchandising methods, to reduce margins when

unduly large, and to obtain a proper profit by greater turnover and a large volume. By reducing the price to the ultimate consumer in this way, a larger market is created for the grower and the trade.

Most of the statistical studies of the industry as to production costs and similar factors have been undertaken by the California Citrus League, an organization which is composed of practically all of the California citrus shippers, including the exchange, and which handles tariff matters, freight rates, and other general problems common to all shippers.

SUPPLY AND BY-PRODUCTS ORGANIZATIONS.

FRUIT GROWERS SUPPLY CO.

The Fruit Growers Supply Co. is owned and operated by the associations and other shippers in the exchange system. In the last analysis it is owned by the growers who are members of the various associations. (See fig. 7.) However, in all instances the stock of the supply company is issued to the association, individual shipper, or packing company and the transactions of the supply company are with the local units. While the capital stock is issued to the associations, the individual growers' pro rata ownership in that stock is reflected in most cases through the associations' books to the individual grower.

The supply company is operated by the affiliated growers for the purpose of securing essential packing-house and orchard supplies. The supply company endeavors to secure supplies of the requisite quality at fair prices and with the assurance of delivery when needed. Although quality, price, and time of delivery are important factors in all of its purchasing operations, the primary need is to secure an adequate quantity of supplies. Failure to obtain box material, nails, or other essentials would mean a disastrous loss to the growers of citrus fruit. It was primarily to avoid the possibility of such loss that the Fruit Growers' Supply Co. was organized.

The supply company's capital stock is subscribed through the carrying into effect of a contract between the individual associations and the supply company, whereby the associations instruct the California Fruit Growers Exchange to deduct 4 cents per box from the proceeds of the sale of their fruit, 2 cents to be used for the purchase of new stock, and the remaining 2 cents to be used to purchase the oldest outstanding stock. These purchases are made three times each year. Consequently adjustment is frequently taking place whereby associations that are increasing their shipments are buying more stock, and they are making these purchases from shippers whose shipments are stationary or decreasing. The object is to keep stock ownership in the hands of those who use the exchange as a marketing organization and to adjust such ownership in proportion to that use.

As the company has grown and as its timber holdings have increased, neccessity has arisen for increasing the capital stock by successive steps from $500,000 to its present capitalization of $6,000,000. At the present time $4,478,130 has been subscribed and paid for; and the subscriptions, by the terms of the revolving fund agreement, will continue at the rate of 2 cents per box until the full amount of $6,000,000 has been subscribed whereupon the total

deduction of 4 cents will be used to retire the oldest outstanding certificates, thus increasing the rate at which stock ownership is readjusted. It is estimated that through the use of this device the capital stock will completely revolve in approximately seven years. In other words, stock issued during any year will be purchased seven years later and the amount paid for this stock will be returned to the respective association for distribution to the growers who contributed it.

It is the policy of the Fruit Growers Supply Co. to accrue an annual dividend of 6 per cent on its capital stock as a part of its operating expense. After deduction of operating expenses, it is provided that 0.1 per cent of the total value of business transacted shall be transferred to a reserve fund; then, after the payment of dividends to stockholders, the balance of the accumulation are available for refund to members on the basis of the amount of business transacted by them through their supply company, thereby reducing the final price paid for materials to net actual cost.

The board of directors of the Calfornia Fruit Growers Exchange, as representatives of the member stockholders, are also the directors of the Fruit Growers Supply Co. (See fig. 8.) The officers are for the most part identical with those of the exchange except that each

General Organization of the Exchange System.

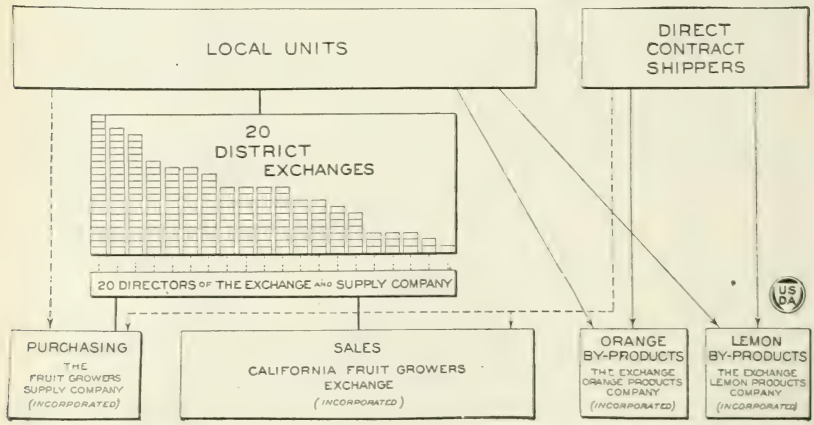

FIG. 8.—The locals are federated into the 20 district exchanges shown. Each district elects a director to the central exchange. The individual locals own the stock of the two by-product companies and the supply company, but the stock of the supply company is held in escrow by the exchange and voted by the exchange directors. The direct contract shippers use all the facilities of the centralized companies, but since they are not federated into district exchanges they are not represented on the board of directors of either the California Fruit Growers Exchange or the Fruit Growers Supply Co.

company has its individual operating organization headed by a general manager. The supply company, therefore, though a part of the exchange system, can not properly be considered a branch or department of the exchange. It is an entirely separate company organized by the associations affiliated with the California Fruit Growers Exchange for the purpose of securing the essential supplies required for the packing and marketing of their fruit, while the exchange is a nonstock marketing organization formed by the same grower-associations for the purpose of marketing their fruit in an orderly manner.

Approximately 50 per cent of the purchases made by the supply company for their members consists of packing-house supplies; that

is, box shook, tissue wraps, labels, nails, etc. The business now transacted for its members approximates $1,000,000 per month. The operating expenses of the Fruit Growers Supply Co. have ranged from 1.3 to 2 per cent of its total sales.

The supply company owns timber tracts in Lassen and Siskiyou Counties, Calif., and in Jackson County, Oreg. (See fig. 9.) Approximately 70,000 acres are owned, upon which is standing 1,500,000,000 feet of virgin timber. In addition, in excess of 1,000,000,000 feet of timber is held under contract with the United States Government on the Lassen and Klamath National Forests. Two mills are operated with a combined annual capacity, if required, of 150,000,000 feet. The requirements of the members of the California Fruit Growers Exchange total about 100,000,000 feet per year. The supply company mills, therefore, could supply the total requirements of its members should necessity arise. In actual practice, however, it is found more economical to sell the better grades of lumber in the open markets, remanufacture the lower grades of lumber into boxes, and repurchase, with the money available from the sale of upper grades box shook manufactured by other mills from their low-grade lumber.

Paper wraps, nails, labels, and other packing-house supplies are purchased by the supply company for its members on the open market, dealing for the most part directly with the manufacturers. Approximately 5,000 tons of tissue wraps alone are annually purchased for its associations. Because of advantages obtained from volume purchasing, a very large amount of orchard supplies, such as fertilizers, fumigation and spraying supplies, frost-prevention equipment and supplies, and cover-crop seed, are purchased for supply company members. Approximately 25 per cent of the business is in orchard supplies.

Because advantage is derived from having a purchasing representative located in the central markets, a considerable amount of sundry purchases is made. This is purely a service feature and is maintained for the accomodation of the associations and their members. It is not planned to expand this phase of the purchasing, because the supply company recognizes that the growers must have local stores which can not exist unless they are patronized. The aim, therefore, is to maintain the purchasing of sundry supplies by the supply company only as a special service to the associations and their members.

The bud-selection department of the supply company performs a service of great value to the growers, because it deals with the very foundation of the industry. Buds intended for use in producing nursery stock are selected by competent men from trees that are known to have produced a high yield of fruit of a desirable quality over a period of years. Accurate records of the "performance" of each tree from which bud wood is selected are kept by the department, or by agencies cooperating with it. Supply company buds have come to be a standard requirement, and the yield of California citrus trees of the grade of fruit produced is being gradually improved through the activities of the bud-selection department.[19]

[19] The method of increasing the yield of fruit trees and improving the quality of the fruit through the selection of bud wood from parent trees of known performance was developed in California by A. D. Shamel, Bureau of Plant Industry, United States Department of Agriculture. The result of Mr. Shamels's investigations have been published in Farmers' Bulletin 794, Yearbook Separate 813, and Department Bulletins 623, 624, 697, 813, and 815.

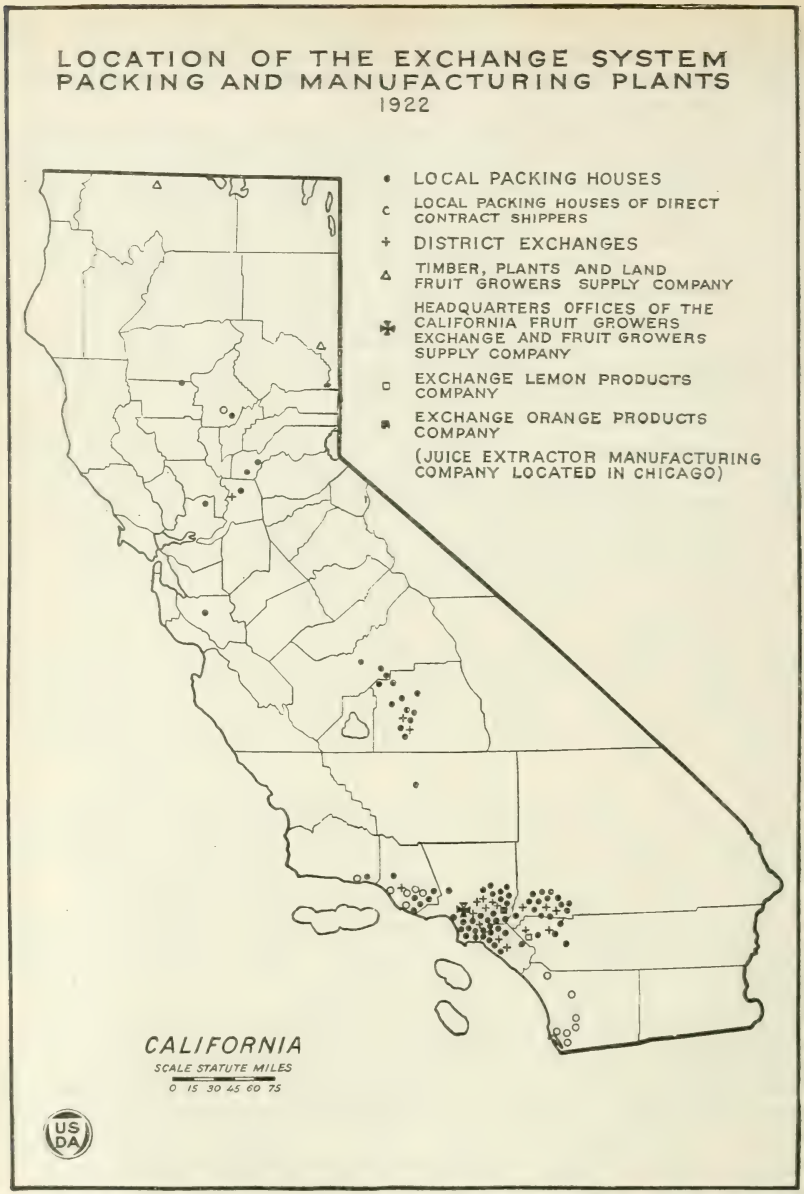
LOCATION OF THE EXCHANGE SYSTEM
PACKING AND MANUFACTURING PLANTS
1922
LOCAL PACKING HOUSES
LOCAL PACKING HOUSES OF DIRECT CONTRACT SHIPPERS
DISTRICT EXCHANGES
TIMBER, PLANTS AND LAND FRUIT GROWERS SUPPLY COMPANY
HEADQUARTERS OFFICES OF THE CALIFORNIA FRUIT GROWERS EXCHANGE AND FRUIT GROWERS SUPPLY COMPANY
EXCHANGE LEMON PRODUCTS COMPANY
EXCHANGE ORANGE PRODUCTS COMPANY
(JUICE EXTRACTOR MANUFACTURING COMPANY LOCATED IN CHICAGO)
CALIFORNIA
SCALE STATUTE MILES
0 15 30 45 60 75
USDA

FIG. 9.—Most of the packing and manufacturing activities of the exchange are concentrated in the territory near Los Angeles. The symbols indicate towns where local packing houses or district exchanges are located, not individual packing houses. There may be two or more packing houses in each of the towns where district exchanges or by-products companies are shown. In addition to the above, a juice extractor assembling plant is located in Chicago and the supply company owns timber tracts in Jackson County, Oreg.

THE EXCHANGE ORANGE PRODUCTS COMPANIES.

The manufacture of by-products from cull oranges was begun in California in 1914 by a corporation located at San Dimas and known as Thomas Crawford, Inc. This corporation was succeeded in 1915 by the Exchange Orange Products Co. Practically all associations

that ship oranges through the California Fruit Growers Exchange were stockholders in this company. Exchange Orange Products Co. suspended operations in June, 1920, with a net loss to its stockholders of approximately $175,000. It was reorganized and reincorporated the following year under the name, "The Exchange Orange Products Co." The only change in the title of the organization was the addition of the word "The" to the corporate title.

The first company failed primarily because it attempted to salvage oranges by the manufacture of marmalade. Only 15 to 20 per cent of the value of the finished product was derived from cull oranges. The remainder was made up of glass, sugar, and labels. The costs of operation, therefore, were very high in comparison with the amount of cull material that was actually salvaged. Moreover, the marmalade manufactured was not uniform in quality, because of an attempt to manufacture large quantities by an expansion of small-scale practices. Each batch of marmalade differed in a greater or less degree from others. Considerable money was spent in an advertising campaign, and a large volume came on the market, but without the development of proper marketing connections to dispose of such quantities, and the lack of uniformity of the product greatly injured its sale. In spite of these handicaps, the organization persisted through the war period and for about a year and a half thereafter, but when the general slump of 1920 came it was forced to suspend operations.

The new company was organized with $150,000 authorized capital, of which $107,000 had been paid in September, 1922. Not all orange associations of the exchange became stockholders in the new company. Many had suffered such severe losses in the old company that they were not inclined to go further with the venture. The associations purchasing the shares of the new company contributed to the working capital on the basis of 3 cents per box of oranges shipped during the season of 1918–19, and agreed to contribute 1 cent per box on all shipments made thereafter to the capital stock of the company. The directors of The Exchange Orange Products Co. are elected by representatives of each member association at the annual stockholders' meeting. One director is elected from approximately each district represented by a district exchange.

The new company took over the plant of the old organization, which was equipped for the manufacture of marmalade. The first year was devoted almost entirely to the installation of new machinery, which had to be designed in part for the uses of the company, and to the instruction of the help in the processes required to manufacture various products.

At the present time the company is selling approximately 20 per cent of the orange oil used in the United States. This product was not obtained in a satisfactory form until March, 1922. Both distilled and expressed oil are secured. The company is undertaking the manufacture of orange vinegar, and, experimentally, small quantities of orange juice, which is concentrated in a high vacuum. Dehydrated orange peel is manufactured, as is also orange peel in brine, which is used by candy manufacturers to make candied orange peel. Experimental work relative to the extraction of pectin from oranges has been carried on.

Out of every 50 tons of cull oranges, about 35 tons of refuse remains, which has had to be hauled to the dump. This refuse has been fed

experimentally to dairy cattle with seemingly good results. Present indications are that cull oranges will be processed in two ways, both of which will consume all of the oranges and leave nothing to be dumped. One process will yield oil, juice or vinegar, pectin, and dairy feed. The other will yield peel, juice or vinegar, pectin, and dairy feed.

The history of orange by-product manufacture by the exchange has been rather discouraging to the stockholders of the company. The reasons for the failure of the first company are clear-cut, and it would seem that its mistakes have been avoided by the new company. However, the venture is strictly in the experimental stage and its success will depend upon (1) the ability of the company to work out the various processes that are still in the experimental stage and (2) its ability to manufacture these products at a cost which will enable it to place a reasonable value on cull oranges.

THE EXCHANGE LEMON PRODUCTS CO.

The Exchange Lemon Products Co. was organized in 1915 by members of lemon associations affiliated with the exchange for the purpose of creating an outlet for cull lemons. According to figures supplied by the manager of this company, from 3 to 20 per cent of the lemons harvested each year are culls which are not suitable for shipment. In the aggregate this amounts to from 500 to 3,000 cars annually, and represents an appreciable loss to the producers. In addition to providing an outlet for cull fruit, the organizers of the Exchange Lemon Products Co. also had in mind the probability that the increase in the production of lemons would necessitate more careful grading to enable the California industry to move successfully in competition with foreign lemons, and that the quantity of waste fruit would be increased in a larger proportion than the increase in the crop.

Not all lemon associations are stockholders of the Exchange Lemon Products Co. The lemon associations in San Diego County, for example, have an outlet for cull lemons at a commercial by-products plant in National City which has been in operation for a number of years. The associations, uniting to form the Exchange Lemon Products Co., agreed to assess themselves 1 cent per box of lemons shipped to create a capital stock fund. In six years the fund amounted to approximately $200,000. All capital stock of the company is owned by the associations subscribing to this agreement, and only the lemons of such members are handled. The stock does not pay dividends and is therefore of no value to an association except as it makes use of the facilities of the company.

An apparent inequality in stock ownership exists, inasmuch as the investment of each association is based on its total shipments, whereas the value of the company's facilities to the association depends entirely upon the quantity of culls delivered. However, whatever inequalities in this respect exist during a particular season will tend toward equalization over a period of years.

The company is controlled by a board of 17 directors elected by the stockholders. Each member association elects a representative to attend the annual stockholders' meeting, and the proxy of the association is issued to this representative. From among their num-

ber the representatives elect the 17 directors. As a general rule one director is elected from each principal lemon-producing section, of which there are 15. At present, the two additional directors are the lemon sales agent of the exchange and a second director from the Corona district.

The products of the plant are citric acid, citrate of lime, and lemon oil. From 35 to 50 pounds of citric acid and 1 to 2 pounds of lemon oil are secured from each ton of cull lemons. During the first six years of operation the company sold more than $1,000,000 worth of these products, returning to the local associations about one-third of the sales value, besides paying the freight on culls from the packing house to the plant. The manager estimates that the plant could furnish one-third the citric acid used in the United States if operated continuously to capacity.

Disposal of cull lemons used to be a difficult problem for the local associations, and entailed an average expense of about $1.50 a ton for hauling to the dump. The by-products company has relieved the local associations of all expense beyond loading in cars, and has returned to the locals between two and three times the entire investment in the plant.

Payments to shippers for lemons are based on the amount of citric acid extracted per ton. The stock of the company at the present time is on a revolving-fund basis. Continuing assessments of 2 cents per box are paid by the members of the company of which, until all capital stock is paid in, 1 cent is invested in the stock of the company and 1 cent used to retire the oldest stock.

ECONOMIC SERVICES OF THE EXCHANGE.

The California Fruit Growers Exchange now markets more than 70 per cent of the citrus product of the State. The contribution which it has made to the development of the industry is correspondingly large. Although this contribution can not be measured exactly, its importance is indicated by a consideration of some of the definite economic services the exchange has performed.

REDUCTION IN PACKING AND MARKETING COSTS.

One of the immediate benefits derived from the organization of the local associations was a material reduction in the cost of packing oranges. Prior to the organization of the exchange, packing charges per box ranged from 35 to 55 cents with 40 to 45 cents the common charge. The associations were able to perform the same, or a superior service, for 24 to 30 cents per box. (5) In 1911, Woodford, (10) comparing conditions in the citrus industry before the organization of the exchange and at that time, said:

> Then the cost of packing a box of oranges and putting it upon the car was between 40 and 50 cents. Now the same service, better done, costs on the average 30 cents.

An average saving of at least 10 cents per box in packing expense is indicated. Present-day costs, of course, are much higher than those of 1893 or 1911. In 1921, the average packing expense for oranges was 75 cents, and the five-year average (1917–21) was 55 cents.

There was also an immediate saving in marketing costs. The average commission charge before the organization of the exchange was 10 per cent, although higher and lower rates were mentioned. As quoted by Lloyd, the actual cost of selling through the exchange in 1895 was about 4 per cent, a saving of a full $50,000 this year to growers. (*1*) In this connection, Mr. Woodford makes the following statement:

> Then (immediately before the formation of the exchange) the growers paid the California shipper 7 to 10 per cent on the gross proceeds for selling the fruit. Now a better service is open to all growers for less than 3 per cent.

For the year ending October 31, 1922, the cost of district exchange and exchange service was 1.89 per cent of the delivered value of the fruit, or 2.27 per cent of the f. o. b. returns, according to the report of the general manager. Savings in packing and marketing costs have, therefore, been a very important contribution to the industry.

Although costs, measured in cents per box, have increased very materially in the past few years, the percentage ratio of marketing expense to gross proceeds has not been increased. The marketing expense of the exchange system, including California Fruit Growers Exchange costs, advertising, and the expenses of the district exchanges, averaged slightly less than 3 per cent of the f. o. b. value of the fruit for the five-year period 1917–1921. Out of the average dollar paid for oranges by the consumer for the period, approximately 40 cents went to the grower, 8 cents to the local packing house, 1 mill to the district exchange, slightly over 1 cent to the California Fruit Growers Exchange for advertising and selling, 18 cents for transportation and refrigeration en route, 8 cents to the jobber, and 25 cents to the retailer.

Out of the average dollar spent by the consumer for lemons during the same period, 33 cents went to the grower, 11 cents to the local packing house, 1 mill to the district exchange, slightly over 1 cent to the central exchange, 14 cents for transportation, 9 cents to the jobber, and 32 cents to the retailer. Expressed in another way, the grower received about five times as much as the cost of packing, or the jobber's margin, and a little over twice the cost of advertising and selling, and for transportation. The retailer's margin was two-thirds that of the grower for oranges, and 97 per cent as much for lemons.

The figures quoted above represent averages for the five-year period. Actually, however, at any given time the percentages varied considerably from these figures.

COOPERATIVE PURCHASE OF SUPPLIES.

As early as 1897 a resolution from the Ontario Fruit Exchange requested that the then Southern California Fruit Exchange take immediate steps to secure commercial and other fertilizers for exchange members at wholesale rates[20] but the cooperative purchase of supplies through the exchange agency did not become a reality until 10 years later.

Following the San Francisco fire in April, 1906, there was a very large demand for lumber throughout California for use in the rebuilding of that city. Although, for the most part, only the upper grades

[20] Minutes of the board of directors, Southern California Fruit Exchange, June 22, 1897.

were so used, yet the excessive demand was reflected in the low-grade lumber for which there was little use other than that created by the agricultural demand. At this time a combination of pine-lumber mills operating on the Pacific coast announced an increase of approximately 100 per cent in their price for orange boxes. This was strongly resisted by the fruit growers. The exchange, in behalf of the grower associations, held contracts with mills outside this combination for much of the requirements of its members; but if it acceded to the demands of the box combination it would be obliged to pay a greatly increased average price for its total requirements. It was to meet this situation that the Fruit Growers Supply Co. was organized.

The situation emphasized the dependence of the citrus industry upon an adequate supply of boxes and other essential materials. At the present time, exchange shippers require 18,000,000 to 20,000,000 fruit boxes annually, valued at $5,000,000 to $6,000,000. An increase in price of 5 cents per box means an added cost of producing and marketing fruit of $1,000,000 to exchange members. Failure to secure the necessary packing supplies would result in tremendous losses.

The Fruit Growers Supply Co. was organized in 1907, and in 1910 the scope of its operation was extended to include the actual manufacturing of box shook. The organization and activities of this supply company have been described in another section.

Cooperative purchasing of supplies has resulted in large savings to the members of the exchange difficult to compute with any exactness. In addition it has placed the exchange shippers in a secure position in so far as their supplies of box material are concerned and has undoubtedly been an important factor in the growth of the exchange during recent years. The general manager of the exchange (*6*) wrote concerning the service of the supply company to exchange members, as follows;

> Constituted as a service organization it is impossible to place in dollars and cents the maximum value of the Supply Company to its members. Its very existence has a stabilizing effect on the prices for essential supplies. This is beneficial to the entire citrus industry and without it the members of the Supply Company would have beed obliged to pay for these supplies an amount much in excess of that actually paid through cooperative purchasing.

Brief mention should be made of the system of mutual fire insurance covering the property of associations and other shippers. The Mutual Indemnity Compact, as it is called, according to exchange officials, has resulted in a saving of 80 per cent in fire-insurance premiums during the past 10 years.

STANDARDIZATION OF THE PRODUCT.

The associations have played a leading part in improving the grade of oranges and lemons shipped out of the State. The pooling system made it necessary to establish grades and brands within the association, and the fact that the fruit of each association was sold on the market in competition with that of all other associations gave an incentive to careful grading. It was not until the adoption of the "Sunkist" trade-mark, however, that the necessity for a unification of the grade standards of all associations became apparent. As the owner of the "Sunkist" trade-mark, the central exchange was in a

position to insist that all fruit shipped under this label should conform to a certain standard. (See Appendix, p. 64.) The work of the field department in promulgating and maintaining the standards of the advertised grades of oranges and lemons has already been discussed. The value of such standards, although generally recognized, can be stated only in general terms and need not be dwelt upon here. The exchange has not only accomplished the standardization of the grade of its own product, but its influence as one of the pioneers in this field has been beneficial to other fruit and vegetable industries.

IMPROVEMENT OF HANDLING PRACTICES.

Decay in California citrus shipments was formerly a serious problem at all times, although it was much worse at certain seasons of the year than at others. Annual losses from decay in 1904, when the United States Department of Agriculture began an investigation of the problem, were estimated at $500,000 to $1,500,000. (7) Many reasons were assigned for this decay. It was thought by many to be due to inherent weakness in the fruit, which was more apparent while the trees were blooming, to weather conditions, or to handling practices. It was generally agreed among the growers that conditions in transit were responsible for a large part of the trouble.

Investigations made under the direction of G. Harold Powell, later general manager of the exchange, demonstrated that, although all of the generally accepted causes of decay were contributing factors to a greater or less extent, the primary cause was injury to the fruit caused by rough handling in the groves and packing houses. An astonishing number of sources of injury were disclosed, and it was quickly made apparent that only constant vigilance on the part of all engaged in handling the fruit would prevent decay. The exchange associations, for the most part, quickly reorganized their handling practices in the light of these results. The organization of the industry made it possible more quickly to disseminate the results of the investigations and institute the necessary reforms. "Largely as a result of the thorough organization of the industry and the active cooperative spirit shown by the leading men in it, a prompt and general modification of methods has resulted and is still in progress," it was stated in the letter transmitting Mr. Powell's summary of the department investigations to the Secretary of Agriculture.

The effect of these improvements has been far-reaching; and, although not confined to the exchange, has served, perhaps more than any other single factor, to place the cooperative marketing of citrus fruit upon a stable basis. The advertising and sales policies of the exchange are now based upon assurance of dependability in the product, and most of the activities of the field department are directed toward the maintenance of this dependability.

EFFICIENT MARKETING.

At the time the exchange was organized distribution through salaried agencies, knit into a comprehensive system covering all car-lot markets in the United States and Canada, was an innovation in the marketing of perishable products. The early growth of the exchange was based largely upon the efficiency of this sales organization. In

evaluating the marketing services of the exchange, sales policies and practices can not be considered apart from other activities of the organization. The work done to establish and maintain a standard dependable product; the activities of the advertising, field, and traffic departments; the by-product plants and the Fruit Growers Supply Co. have all served to strengthen the organization.

The sales departments of the exchange have established a system whereby a product that was formerly marketed speculatively and haphazardly is now distributed uniformly in accordance with approved merchandising methods. This has been accomplished by the development, first of all, of a system of comprehensive market and production reports. With this information as a guide, the distribution of the existing supply can be made in accordance with a carefully worked out plan. Guesswork is eliminated to a large extent, and the problems which must be met from day to day become clear-cut. The keynote of the marketing policy of the exchange is uniform distribution based upon accurate knowledge of supply and demand conditions.

STIMULATION OF CONSUMER DEMAND.

As has been previously shown, the disposal of the constantly increasing crop of California citrus fruit made necessary the development of new markets, as well as an increase in the consuming capacity of established markets. The account given of the advertising department summarizes the more important methods adopted to increase consumption of oranges and lemons. These methods are based upon a study of the consumers' requirements, and for that reason appeal to an observer as being eminently sound. As the next step, the requirements of the retailer have been studied, and from the knowledge already gained efforts are made to improve retailing conditions. The retailer is shown how to display oranges and lemons in such a way as to appeal to his customers; he is shown, also, that a quick turnover on a relatively low margin of profit is to his advantage. At the same time new channels of consumption, such as orangeade and lemonade made from fresh fruit, are sought and developed.

One of the difficult problems in the sale of citrus fruit has been to dispose satisfactorily of the extra large and small sizes. Consumers prefer the medium sizes, and the "off sizes" fail to move and soon clog the channels of trade for all oranges. When the whole crop shows a tendency to run to large or to small sizes, promoting with the trade the advantages of large or small oranges, as the case may be, has modified the consumer demand to a consideraable extent.

An increasingly effective method of facilitating the sale of these sizes has been through the stimulation of demand for fresh-fruit orange and lemon drinks at soda fountains. Off sizes contain as much juice of equal quality as the more preferred sizes and are satisfactory for fountain use. An unexpected obstacle was met when the development of this market was first begun. Dispensers disliked to prepare drinks from fresh fruit, particularly at rush periods, because of the unavoidable untidiness and the time required to prepare such drinks with a small extractor. Synthetic substitutes of all kinds were used by soda fountains and a demand for fresh-fruit drinks was not encouraged.

To overcome this obstacle, the exchange began the manufacture of a fountain juice extractor. The customer sees the drink made before him from fresh fruit and the display of the extractor and the fruit that accompanies it stimulates the demand for lemonade and orangeade. The dealers' objections are overcome because the machine enables the dispenser to prepare fruit drinks quickly and without the untidiness of the old method. The exchange manufactures and sells these machines at cost in order to stimulate the demand for orangeade and lemonade made from fresh fruit.

More than 5,200 extractors were sold during the first nine months of operation, up to October, 1922. Some fountains use as much as eight boxes of citrus fruit a day. It is estimated from present records that all extractors sold will use on the average at least a box of citrus fruit each week throughout the year. At this rate, the 5,000 machines already in use will create a yearly market for 650 carloads. Practically all of this demand is a net addition to the consumption of citrus fruit. Previous to the development of the exchange extractor, nearly all fruit drinks sold at soda fountains were made from synthetic flavoring materials.

Such activities necessarily influence for the better all packing and marketing practices of the exchange. The quality of the product and the manner in which it is handled are gradually made to conform to customers' demands, in so far as an agricultural product can be brought into arbitrary conformity. All departments of the exchange, the field department particularly, district and association managers, and individual growers are influenced in their activities by the results of retail and consumer studies.

National advertising of "Sunkist" oranges and lemons is the most widely known method of increasing the consumption of these fruits. Advertising may create a preference, but can not maintain it if other factors are neglected. The activities described in the above paragraphs must be carried on at the same time.

The success with which consumer demand has been stimulated to absorb constantly increasing shipments of California oranges and lemons can be attributed almost solely to the activities of the organized growers. It is idle to consider advertising an unorganized agricultural product.

EXTENSION OF THE MARKETING SEASON.

Since the organization of the exchange oranges have been shipped from California every month of the year. Formerly the shipping season was from December to May or June. A marketing period 12 months long has resulted from heavy planting of the Valencia orange, which at the time the exchange was organized was of little commercial importance.

The development of commercial plantings of Valencia oranges after the organization of the exchange has added much strength to the cooperative marketing system, because (1) the output of the industry has been doubled without marketing conflicts, and (2) the exchange has been enabled to keep its sales and office force employed throughout the year. Furthermore, oranges can be held on the trees for three or four months after reaching maturity, and sound, "dark-

green" lemons may be stored for a similar period. Aside from the fact that two varieties of oranges have been developed with nonconflicting marketing seasons, each of these varieties can be marketed over a longer period than any deciduous fruit with the possible exception of the apple.

Exchange shipments for the 1909–10 season were 954,130 boxes of Valencia and 4,432,718 boxes of navel oranges. In 1917–18, however, shipments of Valencias exceeded those of navels and have been larger in years following, except during the 1921–22 season when shipments of navels were about 330,000 boxes greater than those of Valencias. On account of a large nonbearing acreage, shipments of Valencia oranges promise to exceed considerably those of navel oranges in the future.

Lemons are picked throughout the year. The heaviest production is during the spring months; and these lemons, as a rule, go on the market during the summer when the demand is greatest. The demand for lemon drinks during hot weather is the most important single factor in the marketing of lemons. The exchange, however, through its advertising has stressed winter uses of lemons and has had some success in establishing a year-round market.

IMPROVEMENT OF TRANSPORTATION SERVICE.

The traffic department of the exchange has always been active in securing better freight and refrigeration rates and better service from the transportation companies. The controversy over rates and service is of long standing. This controversy has had three stages. In the first stage, the unorganized growers accepted whatever service or equipment the railroads offered. Claims for damage to shipments in transit were generally refused by the railroad companies and could be collected only through the courts, if at all. In the second stage, the exchange and other organized shippers were able to secure data regarding the manner in which these shipments were handled in transit. Claims were bitterly fought on both sides, and contentions regarding rates and service were carried to the Interstate Commerce Commission.

A better understanding on both sides was finally reached. Although the Interstate Commerce Commission is still called upon at intervals to adjust questions of rates, the transportation companies have voluntarily made great improvements in their refrigerator-car equipment and in their freight and refrigeration service. Well-established claims for damage to shipments, due to negligence on the part of the transportation companies, are paid without controversy and with reasonable promptness. The exchange shippers, on their part, have put their houses in order. Improvements in handling practices have eliminated a great deal of decay that was formerly charged to faulty transportation. The practice of filing claims for damage on every provocation has been abandoned. The railroads now realize that claims filed by the exchange are presumably justified and are supported by evidence as to the facts. Cooperation between the shippers and the carriers has developed in the solution of transportation problems to the great benefit of the industry.

UTILIZATION OF BY-PRODUCTS.

"Recognizing that the salvaging of the waste of an industry is vital to its prosperity," to quote the general manager of the exchange in his report for 1920–21, the exchange members established by-products plants primarily for the salvaging of cull oranges and lemons. The organization and operation of these companies have been described. Although returns from this source have not been large up to the present time, there are promising possibilities in both orange and lemon by-products. The plants have already served to improve the quality of the citrus fruit shipped from California by offering an outlet for fruit not strictly in the cull class but of inferior quality. During years of large production, an increased percentage of low-grade fruit is sent to the by-products plants, and the market for the higher grades of fruit is stabilized at a time when such stabilization is most necessary.

It must be remembered that the by-products plants operate under handicap of constantly fluctuating supplies of raw material. These fluctuations result in idle plants and machinery for a portion of the year, and in a large, unavoidable labor turnover, all the more serious because a training period of more than average length is necessary to make a workman familiar with by-product processes. In spite of these difficulties they have rendered a useful service to exchange members with the possibility of increased usefulness in the future.

SOME FUNDAMENTALS OF THE EXCHANGE SYSTEM.

What are the fundamental principles upon which the exchange was organized, and by which it has been guided in its operation? To what extent are these in harmony with generally accepted principles of cooperation? Some departures from strict cooperative principles, notably the admission of commercial packing companies as members of a district exchange or as direct contract shippers, have already been mentioned. The following discussion will relate most directly to the local cooperative associations. It will simplify the discussion to consider the district exchanges and the central exchange merely as the creations and the agents of the associations and their members, and the principles upon which they are organized and the policies under which they operate as expressions of the principles and policies of the associations. The feature of local control of the central and district exchanges, therefore, may be accepted as the first principle of the exchange system.

OPERATION FOR MUTUAL BENEFIT.

The associations and the exchanges are operated for the mutual benefit of the members. No dividends are paid on the capital stock of the associations or district exchanges. The central exchange is organized as a nonstock corporation and can make no profit on its operations. Dividends on the stock of the by-products companies and the supply company are limited to 6 per cent. In the marketing organizations, therefore, there can be no conflict of interest between stockholders and patrons. The patrons are stockholders in proportion to their orchard holdings, or to the amount of fruit which they ship; and invested capital, as such, yields no interest.

On the other hand, the members have equal rights to the facilities of the association. Oranges and lemons are harvested from the

orchard of each member on a percentage basis. Each member, if he so desires, is represented in each pool by the same percentage of his total fruit as is delivered by other members. On the other hand, he is under the same obligations as other members to deliver this fixed percentage to each or any pool if the board of directors determine that this is for the best interests of the group. The fruit of each member passes through exactly the same grading and packing processes as that of all others and, in accordance with the grade of fruit which he delivers, each member receives exactly the same price as all others shipping in the same pool. All proceeds are distributed solely on the basis of the business transacted by the members through the association, with such modifications as arise from variations in grade and the percentage of fruit delivered to the various pools.

The rights and obligations of the members, therefore, are equal, in so far as the benefits derived from the association are concerned. In actual practice, however, it is inevitable that some members will be more active than others in the management of the association and have more influence in the direction of its affairs. Moreover, the responsibilities of the members are not always equal. It has been common, for example, for the directors of an association to indorse its notes. Although no cases have been pointed out where directors were obliged to pay such notes, nevertheless a burden is thus imposed upon a few men for the benefit of the community as a whole.

LIMITATION OF MEMBERSHIP.

The limitation of membership to actual producers is a cardinal principle of the exchange system. In some instances, through the withdrawal or death of a member, a portion of the stock of an association may be held by a nonproducer. Such a condition is usually only temporary. Inasmuch as no dividends are paid it is not to the interest of a nonproducer to hold the stock; consequently such stock sooner or later passes into the hands of a producer. The by-laws of most associations provide that a stockholder who is not a patron shall have no voice in the management of the association. In other words, nonproducer stockholders are not considered bona fide members.

At the same time, no producer in the territory covered by the association is denied admission to membership for personal reasons. A prospective member is judged by his orchard. A man growing lemons exclusively would not, of course, be admitted to an association handling only oranges, nor would he desire membership in such an association. An applicant may be denied membership because his orchard is outside of the territory of the association, or his fruit may be more conveniently handled by another association; or, in rare instances, because his orchard is in poor condition and the fruit which he produces distinctly inferior.

However, nonproducers in the persons of corporations, partnerships, or individuals operating packing houses and engaged in the business of packing citrus fruit may be members of the central or district exchanges. Practically, this does not affect the cooperative management of the exchanges. In effect, the affiliated growers have extended the services of their marketing agencies to a few noncooperative concerns. The policy, however, is unsound in principle; and if the number of such commercial companies were considerably enlarged it would be dangerous in practice.

MEMBERS INFORMED AND CONSULTED.

The annual report of the general manager of the exchange gives in some detail the business of the exchange for the previous year. Total business, prices received, operating expenses, and other statistical information of interest to the members are presented. The activities of the various departments, the policies of the exchange, and the general outlook for the industry are discussed. Practically the same report with reference to local affairs is presented by district and association members. At the annual meeting of the associations special efforts are made to secure a full attendance of all members. The meeting is usually an all-day affair. All matters relating to the marketing of the fruit and the operation of the packing house are discussed. Although the meetings are usually harmonious and routine in nature, it often happens that grievances against either the association or the exchanges are freely voiced.

The members of the association are closely in touch with the business of the exchange. A visitor to the office of an association frequently finds there one or more growers seeking information regarding proceeds of sales, already paid or to be distributed, and market conditions. The member receives, in addition to the information furnished by the manager or his assistants in response to his inquiries, the bulletins of the exchange which give in detail shipments, arrivals, sales, and prices from the opening of the season. Still more frequently the manager is called upon to give information of this nature by telephone. The pool sheets and other records are open to inspection by members.

That the affairs of the exchange are carried on in the open is exemplified by weekly directors' meetings. These are held in a large room, really a small auditorium, and are open to all growers and association officials, in fact, to anyone interested in marketing. The usual attendance is 100 to 150 persons, in addition to the 20 directors. It is not uncommon for a grower or an association manager to contribute to the discussion. Executive sessions of the board are usually held only in connection with the employment, promotion, or discharge of employees. In consequence, matters of policy become public at the same time that they are formally presented to the directors. Often they are thoroughly discussed in the districts and locals before a vote is taken. It is true, no doubt, that much of this information does not get back to the rank and file of the exchange except slowly and indirectly; but the district and association directors and, in fact, any grower who makes it his business to be informed regarding exchange affairs, soon learn what is going on and add their opinions to the general discussion.

CONSERVATIVE PRACTICES.

Local control and the public deliberations of the directors have freed the exchange to a remarkable extent from radical and ill-considered action. Although this control may sometimes prove irksome and delay or frustrate well-conceived policies, it is a decided element of strength. Not only are mistakes less likely to occur, but when mistakes are made they are generally felt to be a common error rather than the fault of one or two individuals. There is much less likelihood, therefore, that the morale of the members will be impaired by

errors of judgment or losses arising therefrom. Many important policies are formulated by committees of growers or managers cooperating with the exchange directors.

Through this control and interest in the business of the exchange a clear understanding of the limits of cooperation has developed. The organized growers have never been led aside into political controversies, social reform, or other issues and distractions. The exchange has held steadily to its main business of marketing the fruit of its members efficiently.

COOPERATION WITH OTHER AGENCIES.

It has been the policy of the exchange to cooperate with railroad officials, jobbers, and retailers in measures to improve the conditions under which California oranges and lemons are transported and sold. The exchange has never been unmindful of its public responsibiliy. The following extract from an address by its former general manager makes clear the policy of exchange in this respect:

> A cooperative organization has a distinct responsibility to the public. It can not live for itself alone. Through the cooperative handling of farm crops, the farmer should receive a fair return for his products; but such cooperation should be an important factor in reducing the general cost of living through the economies that result from the organized preparation, distribution, and sale of standardized products. * * *

WITHDRAWAL PRIVILEGE.

The exchange system is based upon contracts between the growers and the associations,[21] between the associations and the district exchanges, and between the district exchanges and the exchange. All contracts run for long periods. The contracts between districts and the exchange now in force were executed in 1920 and are effective until 1940. All contracts permit a member association or district to withdraw during a certain period of any year. The withdrawal period usually comes at the end of the fiscal year and varies from 15 to 30 days in length. The following quotation fairly expresses the policy of the exchange with regard to membership agreements:

> It is in the interest of dependability that a membership agreement should extend over a long period of years, if provision is made that any dissatisfied member may withdraw at some specified time during its existence. The long-term contract adds greater stability to the organization as an institution of business; while the withdrawal privilege, when reasonably safeguarded, removes the dangers that are inherent in unwilling cooperation. (*8*)

Partly because of the withdrawal privilege, breach of contract by members has been rare in the history of the exchange system. The membership of the associations, especially associations of long standing, is quite stable. A few growers withdraw from year to year and new members are added to the organization. Occasionally a group of members in a particular neighorhood withdraw for the purpose of forming a new association. The development of citrus culture has been so rapid in southern California that it is not uncommon to find that one of the older associations has been the parent of three or four organizations formed at later periods. Loss of membership, however, is not a common problem of the associations. It is much

[21] There is some indication that a formal contract between growers and their association is becoming less common. Some associations require their members only to sign the by-laws; a few are satisfied with an acceptance of the by-laws provisions which is implicit in membership in the association.

more common for association managers and directors to declare that they have "too many members," or more fruit than can be conveniently handled without enlarging the packing-house facilities.

This condition is due first of all, of course, to the economy and efficiency of the exchange service. Another factor, perhaps not of great importance, but emphasized in some instances by independent shippers, is the fact that in many sections no modern packing facilities are open to the growers except those of the cooperative associations.

The withdrawal of an association from a district exchange occurs from time to time. Such withdrawals are usually of those associations that are recently organized or in sections outside the main citrus district. The withdrawal of a strong, well-established association has not occurred in recent years. Somewhat more frequently commercial companies or individual shippers withdraw from the organization.

As has already been mentioned, the Semi Tropic Exchange remained outside the organization for two months in 1894, but returned before the shipping season opened. With this exception no district exchange has ever left the organization. The San Bernardino County Exchange filed notice of withdrawal in 1903, as a protest against the formation of the California Fruit Agency, but was persuaded to remain in the exchange.

The exchange members, therefore, although they consider a formal contract an important detail, do not look upon it as fundamental. The fundamentals, rather, are voluntary cooperation and a broad cooperative spirit which looks beyond immediate personal advantage to long-time results and the welfare of the industry as a whole.

MEMBERSHIP LOYALTY.

Membership loyalty is often mentioned as an essential to the success of a cooperative undertaking. There is no doubt that the cooperative spirit is strongly developed among exchange growers. Very many of them have never marketed fruit under any other system and have never considered the adoption of any other plan. In addition, the majority recognize that as members of a group they can not consistently seek personal advantage at the expense of their fellow members.

Loyalty to the organization, however, does not prevent criticism of its real or imagined shortcomings. Local pride may sometimes soften criticism of the management of an association, but the activities of the central exchange are subjected to a constant and critical scrutiny. The officers and directors of the exchange must be sure of their ground; they must be able to demonstrate that the action taken in a particular instance was well-considered and, according to the best judgment available, in the interest of the members. This tends to consultation and the absence of anything savoring of autocracy on the part of the central office. It does not, however, relieve the management from the responsibility of initiating improvements and taking such action as is necessary to correct changing conditions. The situation, perhaps, may be summed up by the statement that an appeal to the loyalty of exchange members must be based on facts and information; it can not be made on the basis of a blind faith in the wisdom of the management.

APPENDIX.

ORGANIZATION AND MARKETING PLAN ADOPTED BY THE SOUTHERN CALIFORNIA FRUIT EXCHANGES, LOS ANGELES, AUGUST 29, 1893.

Each district to organize a district fruit exchange embracing a proper representation from each local association within the district.

Under this organization to establish a district brand for the different grades of fruit that shall also give due prominence to the local identity.

All local conditions to be harmonized and controlled and all orders and distribution of fruit prorated for the entire district under the said exchange.

The boards of exchange in each of the several districts to establish a central office where the managers of the several local associations embraced in the several districts shall meet daily, or as often as they may determine, to transact the necessary business.

The correspondence and business of said central office to be in charge of a secretary chosen by the district board of exchange but accessible to each of said managers at all times.

Each of said local associations to furnish the district board of exchange at the opening of the shipping season a carefully prepared estimate of the amount of fruit embraced in the district, varieties, and grades.

By direction of the several boards of exchange to create an executive board, to be chosen from the boards of managers in the respective districts, upon the basis of one member for each 100 cars of fruit or majority fraction thereof, providing only that each district shall have one representative.

The voting power in each executive board to be one vote for each 100 carloads of fruit or fractional majority thereof in each district.

Each of said districts to fix the price for the respective grades of fruit embraced in each, said prices to be adjusted from time to time by said executive board in such manner as to secure the pro rata movement of fruit.

Each of said districts to be allowed to fill all f. o. b. orders obtained for any grade of fruit.

The said executive board under direction and approval of the several district boards of exchange, to establish branch houses for the sale and distribution of the fruit embraced in the several districts at such points as may be agreed upon, and each of said districts to be allowed their pro rata of the number of representatives that may be agreed upon to properly handle and distribute the fruit furnished the said branch houses under the direction and control of said executive board, subject to the approval of the several boards of exchange.

The expense of maintaining the branch houses and representatives in the east are to be borne by southern California, pro rata, according to the oranges shipped during the season.

The said representatives to be interchangeable for the territory covered by said branch houses in a manner to afford ample protection to all interests involved and each to have access to all matters pertaining to the business connected with either or all of said branches.

Each of said district exchanges shall at the opening of the shipping season furnish the executive board with a carefully prepared estimate of the number of boxes of each variety and grade of fruit in their respective districts.

Said estimates to be subject to revision and adjustment by the said board at any time during the season.

Each of said districts shall furnish the executive board a complete statement of shipments of varieties and grades of fruit as often as may be required.

The said executive board shall meet as often as may, in its judgement, be necessary, or at the call of any district board of managers or any district board of exchange, to adjust prices, regulate the distribution of fruit, or transact any other business that may properly come before it.

Any inequality that may at any time appear in the pro rata of shipments shall be adjusted by ordering shipments to the several branch houses in such ratio from the several districts as may be required to restore and maintain the pro rata.

The several branch houses shall keep the executive board posted in such matters and manner as may be required from time to time.

The said branch houses shall at all times be under the control of the executive board, subject to the supervision of the board of exchange.

All matters of dispute in and matters outside the executive board shall be determined by the several boards of exchange.

All references to carloads shall be construed to mean 300 boxes of fruit.

Said executive board, with the approval of the several boards of exchange, to further determine and arrange matters of detail, as the conditions may from time to time require.

At the opening of the season the several districts to unite in a circular to the trade setting forth the plan and purposes of this organization, and such other matters as may be agreed upon.

ARTICLES OF INCORPORATION OF CALIFORNIA FRUIT GROWERS EXCHANGE.

KNOW ALL MEN BY THESE PRESENTS:

That we, the undersigned, a majority of whom are citizens and residents of the State of California, and each of whom is a person engaged in the production or marketing of citrus fruits, have, pursuant to Sections 362 and 653r of the Civil Code of California providing for the amendment of articles of incorporation, voluntarily associated ourselves together for the purpose of forming a nonprofit cooperative horticultural association under the laws of the State of California, and for such purpose;

WE HEREBY CERTIFY:

FIRST.—That the name of said association is and shall be: CALIFORNIA FRUIT GROWERS EXCHANGE.

SECOND.—That the purpose for which it is formed is:

To furnish the facilities and agencies through which the citrus fruits and their by-products of its members and growers represented by them may be marketed through the United States and other countries under such conditions as may be determined upon by contract between this Exchange and its members and organizations of growers which they represent;

To lessen the cost of marketing by creating agencies which will act for all members;

To insure the collection of sales; to facilitate the collection of damage claims; to encourage the improvement of the product and the package;

To improve the methods of fruit handling in the groves and in the packing houses; to improve the equipment and facilities for fruit handling; to standardize the grades and the pack, particularly of the advertised brands of the Exchange, and to increase the Exchange membership; to standardize the business methods of its cooperating organizations;

To increase the consumption of citrus fruits and their by-products by bringing about an equitable distribution thereof at all times to all markets and by developing new markets;

To organize and maintain a traffic department for the handling of traffic matters including claims; to maintain a legal department; to maintain an advertising department for the purpose of increasing the consumption of citrus fruits and their by-products; to institute and conduct any other department to assist in carrying out its purposes; to further and to safeguard the general interests of the citrus industry;

To purchase or otherwise acquire, own, hold, lease, mortgage, and sell such real and personal property as may be necessary, desirable or convenient for the legitimate carrying on of any of its purposes; to purchase or otherwise acquire, to own, hold, sell, transfer or pledge shares of the capital stock of any corporation or association which may be necessary, convenient or desirable in furtherance of the legitimate purposes of the Exchange as contained herein, and while the owner thereof to exercise all the rights of ownership including the right to vote said shares of stock;

To apply for, take out, acquire, own, use and dispose of trademarks, copyrights, and patents necessary, convenient, or desirable for furthering any of the purposes for which this Exchange is formed, and to make rules and regulations with reference to the use thereof and from time to time change, modify or repeal such rules and regulations;

To borrow money of any persons, firm or corporation, and to secure the payment thereof by note, mortgage, bond or deed of trust or other evidence of indebtedness or by any other lawful means, and to take and receive notes, bonds, mortgages, deeds of trust or any evidence of indebtedness for the use and benefit of said corporation;

The Exchange is instituted for the purpose of mutual help in the accomplishment of each of the purposes above set forth. It shall not have a capital stock and it shall not be conducted for profit.

THIRD.—That the place where the principal business of said Exchange will be transacted is the City of Los Angeles, County of Los Angeles, State of California.

FOURTH.—That the term for which said Exchange is to exist is fifty (50) years from and after the date of its original incorporation, to wit, from and after the 25th of March, 1905.

FIFTH.—That the number of directors of said Exchange upon its original incorporation was thirteen (13); that by proceedings duly and regularly taken subsequent to its incorporation and prior to the present time, the number of its directors has been from time to time increased until the number of its directors at this time is seventeen (17); that the names and residences of its present directors and who shall act as such until their successors shall have been elected and shall have accepted office, are;

* * * * * * *

SIXTH.—That the voting power and the property rights and interest of each member shall be equal. This Exchange shall have power to admit new members who shall be entitled to vote and to share in the property of the Exchange with the old members in accordance with the rule stated in this subdivision.

SEVENTH.—This Exchange shall issue a certificate of membership to each member but neither said membership nor said certificate thereof shall be assigned by a member to any other person or corporation, nor shall the assignee or transferee thereof be entitled to membership in this Exchange or to any property rights or interest therein, nor shall a purchaser at execution sale, or any other person who may succeed, by operation of law or otherwise to the property interests of a member, be entitled to membership, or become a member of this Exchange by virtue of such transfer.

The board of directors of this Exchange may, however, by motion duly adopted by it, consent to such assignment or transfer and to the acceptance of the assignee or transferee as a member of this Exchange, but this Exchange shall have the right, by its by-laws, to provide for or against the transfer of membership and for or against the assignment of membership certificates, and also the terms and conditions upon which, if at all, any such transfer or assignment shall be allowed.

IN WITNESS WHEREOF each of said persons has hereunto subscribed his name and seal, all done this 21st day of June, 1916.

* * * * * * *

Filed June 23, 1916, with Secretary of State of California

BY-LAWS OF CALIFORNIA FRUIT GROWERS EXCHANGE.

KNOW ALL MEN BY THESE PRESENTS:

That we, the undersigned, together constituting and being all of the members, directors and Secretary of California Fruit Growers Exchange, a corporation, do hereby adopt the following new code of by-laws:

ARTICLE I.—*Former By-Laws Repealed.*

All former by-laws of this Exchange are hereby repealed.

ARTICLE II.—*Meeting of Members.*

SECTION 1.—*Regular Members' Meeting*—A regular annual meeting of the members shall be held at the office of the Exchange at two o'clock, p. m., on the second Wednesday in September of each year for the purpose of electing a board of directors and transacting such other business as may come before the meeting.

SECTION 2.—*Special Members' Meetings.*—Except in those instances where a particular manner of calling a meeting of the members is prescribed by the law or elsewhere in the by-laws of this Exchange, a special meeting of the members may be called at any time by the President, or by the vote of a majority of the board of directors, or by one-third of the members. Each call for a special meeting of the members shall state the time, the place, and the purpose of such meeting; if made by the board of directors it shall be by resolution duly adopted and entered in the minutes; if made by the President or by members it shall be in writing, signed by the person or persons making the same, and unless the office of the Secretary be vacant, delivered to the Secretary. No business shall be transacted at a special meeting other than such as is included in the purposes stated in the call.

SECTION 3.—*Notice of Regular Members' Meeting.*—Ten days' notice of each regular meeting of the members shall be given by order of the President by mail as herein provided. Such notice must state the time and the place of the meeting and that the purposes thereof are the election of a board of directors and the transaction of such other business as may come before the meeting, and a copy thereof shall be mailed to each member of the Exchange. Such notices shall be deposited in the post office at Los Angeles, California, with the postage thereon prepaid, at least ten days prior to the time for holding such meeting. Such envelope shall be mailed by the Secretary, but in case the office of Secretary be vacant or he shall refuse or neglect to mail the same, then such notices may be mailed by any director of the Exchange or by any person thereto directed by the President. Such notices shall be addressed to the residence or place of business of the member, as the same shall appear upon the books of the Exchange, and if the residence or place of business of such member does not appear upon the books of the Exchange and his post office address is unknown to the person mailing such notice, the same shall be addressed to such member at Los Angeles, California.

SECTION 4.—*Notice of Members' Special Meeting.*—Notice of each special meeting of the members shall be given by mailing to each member a sealed envelope containing a copy of the call for such meeting and addressed to his residence or place of business as the same shall appear upon the books of the Exchange. Such envelopes shall be deposited in the post office at Los Angeles, California, with the postage thereon prepaid, at least five days prior to the time fixed for such meeting. Such envelopes shall be mailed by the Secretary, but in case the office of the Secretary be vacant or he shall refuse or neglect to mail the same, as provided in this section, then such envelopes containing such copies may be addressed and mailed by any director of the Exchange or by any person who shall have signed the call for such meeting. If the residence or place of business of any such member does not appear on the books of the Exchange and his post office address is unknown to the person mailing such envelopes, the same shall be addressed to such member at Los Angeles, California.

SECTION 5.—*Quorum.*—At any meeting of the members a majority of the members being present in person or represented by proxy shall constitute a quorum for all purposes, including the election of directors, except when it is otherwise provided by law.

ARTICLE III.—*Board of Directors.*

SECTION 1.—*Number.*—The corporate powers, business and property of the Exchange shall be exercised, conducted and controlled by a board of directors consisting of seventeen (17) members, or such other number to which the same may be increased or diminished as by law provided.

SECTION 2.—*Election.*—The directors shall be elected annually at the regular annual meetings of the members from the membership of the Exchange.

SECTION 3.—*Vacancies.*—Vacancies in the board of directors shall be filled by the other directors in office, and such persons shall hold office until the next regular annual meeting of the members thereafter, except as it is otherwise herein provided.

SECTION 4.—*First Meeting of Directors.*—Immediately after each election of directors, the newly elected directors shall hold a regular meeting and organize by the election of a President, one or more Vice-Presidents, a Secretary, one or more assistant Secretaries, a Cashier, one or more assistant Cashiers, a Treasurer, and at such meeting may choose any or all other officers, agents, or employees of the Exchange and transact any other business. The board of directors may also at that, or at any subsequent meeting, by resolution select one or more banks to act as depository of the funds of the Exchange and determine the manner of receiving, depositing, and disbursing the funds of the corporation, the form of checks and the person or persons by whom the same shall be signed, with power from time to time to change such banks and the person or persons signing said checks and the form thereof. Notice of such meeting is hereby dispensed with.

SECTION 5.—*Regular Directors Meetings.*—In addition to the regular meeting mentioned above, a regular meeting of the board directors shall be held at ten o'clock a. m., on Wednesday of each week.

SECTION 6.—*Special Directors Meetings.*—A special meeting of the board of directors shall be held whenever called by the President or by one-third of the directors. Any and all business may be transacted at a special meeting. Each call for a special meeting shall be in writing, signed by the person or persons making the same, addressed and delivered to the Secretary, and shall state the time and place of such meeting.

SECTION 7.—*Notice of Regular Meeting of Directors.*—No notice of the regular meetings of the directors need be given, but each director shall take notice thereof. Notice of such meeting is hereby dispensed with.

SECTION 8.—*Notice of Special Meeting of Directors.*—Notice of each special meeting of the directors shall be given by mailing to each director a sealed envelope containing a copy of the call for such meeting, addressed to his residence or place of business. Such envelopes shall be deposited in the post office at Los Angeles, California, with the postage thereon prepaid, at least two days prior to the time of such meeting. Such envelopes shall be mailed by the Secretary, but in case he is unable or refuses to act, such envelopes may be so addressed and mailed by any person who shall have signed the call for such meeting.

ARTICLE IV.—*Power of Directors.*

The directors shall have power:

(a) To call special meetings of the members when they deem it necessary. And they shall call a meeting at any time upon the written request of one-third of the members.

(b) To appoint and remove, at pleasure, all officers, agents, and employees of the Exchange, prescribe their duties, fix their compensation, and require from them, if deemed advisable, security for faithful service.

(c) To conduct, manage, and control the affairs and business of the Exchange and to make rules and regulations not inconsistent with the laws of the State of California, the articles of incorporation of the Exchange or its by-laws for the guidance of the officers and management of its affairs.

ARTICLE V.—*Duties of Directors.*

It shall be the duty of the directors:

(a) To keep a complete record of all their business transactions, their minutes and acts, and of the proceedings of the members, and present a full statement at the regular annual meeting of the members, showing in detail the condition of the affairs of the Exchange. A similar statement shall be presented at any other meeting of the members when thereto required by at least one-third of the members of the Exchange.

(b) To supervise all officers, agents, and employees and see that their duties are properly performed. To cause to be issued to the members appropriate certificates of membership as prescribed by order of the board of directors.

(c) To carry out and faithfully perform the terms of all contracts which shall be made by this Exchange with the several District Exchanges, as well as the terms of all other contracts which may be entered into by this Exchange.

(d) The directors shall receive no compensation or expenses from the Exchange for their services in acting as directors of the Exchange.

ARTICLE VI.—*Officers.*

The officers of the Exchange shall be a President, one or more Vice-Presidents, a Secretary, one or more Assistant Secretaries, a Cashier, one or more Assistant Cashiers, a Treasurer and a General Manager, together with any other officers which the board of directors may see fit in its discretion to provide for by resolution entered upon its minutes.

The compensation and tenure of office of all officers of the Exchange other than directors shall be fixed and determined by the board of directors.

ARTICLE VII.—*The President.*

The board of directors shall, at their first regular meeting, elect one of their number to act as President; and if at any time the President shall be unable to act, the First Vice-President shall take his place and perform his duties; and if the Vice-President shall also be unable to act, then the Second Vice-President shall act; and if both the First and Second Vice-Presidents from any cause shall be unable to act, the Board shall appoint one of its members to act, in whom shall be vested for the time being all the duties and functions of President. The President, or in his absence such Vice-President or director acting as President shall:

(a) Preside over all meetings of the members and directors.

(b) Sign, as President, all certificates of membership, and all contracts and other instruments which have been first approved by the board of directors.

(c) Call the directors together whenever he deems it necessary, and discharge such other duties as may be required of him by these by-laws.

ARTICLE VIII.—*Secretary.*

It shall be the duty of the Secretary:

(a) To keep a journal of all meetings of the directors and members of the Exchange with the time and place of holding the same: whether regular or special, and if special, its object, how authorized, and the notice thereof given. The record must embrace every act done or ordered to be done; who were present and who absent; and, if requested by any director or member, the time shall be noted when he entered the meeting or obtained leave of absence therefrom. On similar request, the ayes and noes must be taken on any proposition, and a record thereof made. On similar request, the protest of any director or member to any action or proposed action must be entered in full.

(b) To keep the corporate seal of the Exchange and, when directed to do so by the Exchange, affix the same to all papers requiring the corporate seal.

(c) To keep a proper membership book, showing the name of each member of the Exchange, the number of his membership certificate, and the date of its issuance, surrender, cancellation, forfeiture, or transfer.

(d) To discharge such other duties as pertain to his office and as are prescribed by the board of directors.

(e) To serve all notices required either by law or by the by-laws of the Exchange. In case of his absence, inability, refusal or neglect so to do, such notices may be served by any person thereunto directed by the President or either Vice-President of the Exchange.

ARTICLE IX.—*Treasurer.*

The Treasurer shall:

(a) Receive and keep all funds of the Exchange except deposits in Eastern depositories, which latter are the trust funds of the District Exchanges, corporations or associations affiliated with it. The funds in the Treasurer's care shall be paid out only on checks signed by the Cashier or Assistant Cashier, countersigned by the Secretary, Assistant Secretary, President, or either of the Vice-Presidents. Checks on the trust funds in the Eastern depositories shall be countersigned by the Agent of the district in which said depository is located, and signed by the Cashier, Assistant Cashier, or President.

(b) At each annual meeting of the members, and as often as the board of directors may require it to be done, submit for their inspection a complete statement of his accounts, with proper vouchers, and at each and every regular meeting of the board of directors he shall submit a statement showing the receipts, disbursements, and balances on hand. He shall discharge such other duties appertaining to his office as shall be prescribed by the board of directors, and shall furnish such bond from time to time as the board of directors may require.

ARTICLE X.—*Auditing Committee.*

The board of directors of the Exchange may by resolution provide for the appointment or selection of an auditing committee from among its members, determine the number of its members and its tenure of office. It shall be the duty of this auditing committee to meet at least once a week and to pass upon all accounts and expenditures of the Exchange.

ARTICLE XI.—*Books and Papers.*

All books and records of this Exchange shall at all times in business hours be subject to the inspection of the board of directors or any member.

ARTICLE XII.—*Membership and Voting.*

The general purpose for which the Exchange is instituted is to furnish the facilities and agencies through which the citrus fruits and their by-products of its members and growers represented by them may be marketed and distributed upon a uniform plan and in such manner as to bring about a standard of quality, a more uniform distribution and a larger consumption thereof in the markets of the United States and in other places. In order to make such facilities and agencies available

to the grower, the plan of the Exchange includes the organization of the growers into "Local Associations" and the affiliation of those local associations into "District Exchanges."

Exchange Membership.

This Exchange will have as many members as there are District Exchanges under contract, as such, with this Exchange. Each District Exchange will nominate some person to act for it as its member in this Exchange. This Exchange will have as many directors as it has District Exchange members, so that each member thus nominated by the District Exchange will also be a director of this Exchange.

Each District Exchange may at will, and as often as it desires, change its member representative in this Exchange. Upon the certification of a new representative to the board of directors of this Exchange, the membership of the former representative of such District Exchange shall absolutely cease and terminate. Such new representative shall thereupon be elected by this Exchange as one of its directors in place of the former member.

This Exchange shall issue a certificate of membership to each member, but the said membership shall not, nor shall the said certificate thereof, be assigned by said member to any other person, and the assignee thereof shall not be entitled to membership in the Exchange or to any property rights or interests therein, nor shall a purchaser at execution sale, or any other person who may succeed by operation of law or otherwise to the property interests of a member, be entitled to membership or become a member of the Exchange by virtue of such transfer. The board of directors may, however, by motion duly adopted by it, consent to such assignment and transfer and to the acceptance of the assignee or transferee as a member of this Exchange, but it is expressly understood and agreed between all of the members that no membership shall be transferred or any membership certificate assigned unless with the consent of the board of directors of this Exchange first had and received. However, when a District Exchange desires to change its member representative in this Exchange from one person to another, the board of directors of this Exchange shall recognize the transfer and assignment of such membership and issue a new membership certificate to such new representative. The manner in which the District Exchange may indicate that it desires to change its representative, as well as the method by which any change of such representative is to be brought about, shall be determined by the board of directors of this Exchange by resolution entered upon its minutes.

No person shall be a member of this Exchange unless he and the District Exchange which he represents market all of the citrus fruits which he and it has to market or dispose of through the facilities and agencies afforded by the Exchange, and if any member or District Exchange shall cease, fail, neglect, or refuse for any reason whatsoever to market the whole of such citrus fruits through this Exchange, then in that event the membership of such member and of such District Exchange in this Exchange, and in its property, shall *ipso facto* cease and terminate, and the membership certificate of such member and his membership in this Exchange, and all of the right, title, and interest of such member and of such District Exchange therein, shall be thereby canceled, and such member shall not nor shall such District Exchange be entitled to any appraisement or interest in the property or good will of the Exchange.

Each District Exchange agrees that it will require each of the Local Associations composing its membership to enter into uniform contracts with it in such manner and form as may be prescribed by the board of directors of this Exchange, which contracts will require each Local Association to market all of the citrus fruit which it has to market or dispose of through this Exchange and said District Exchange.

The voting power and the property rights and interests of the members of this Exchange shall be equal.

The Exchange shall have power from time to time to admit additional members to its organization whenever there shall be in its opinion sufficient reason to make an additional District Exchange advisable, which new member (and the District Exchange which such member represents) shall be entitled to vote and to contribute to and share in the property of the Exchange with the former members, in accordance with the general rule therein stated and upon such terms as may be prescribed upon the admission of any new member, it being the purpose of this Exchange that its facilities be available at all times and upon equal terms to all growers of citrus fruits, provided only that such growers shall have first provided themselves with proper local association and district exchange facilities.

ARTICLE XIII.—*Proxies.*

Any member shall be permitted to vote at any meeting of the members, either regular or special, by proxy, which proxy shall be in writing executed by the member in the manner and form required or permitted by law.

ARTICLE XIV.—*General Manager.*

The board of directors may in its discretion appoint a General Manager who shall hold office at the pleasure of the board of directors. Any director or other person may be elected to serve as General Manager. The General Manager shall have such authority and shall perform such duties as are incident to the office.

ARTICLE XV.—*Re Borrowing Money.*

The board of directors shall have the power to incur indebtedness, and the terms and amount thereof shall be entered in the minutes.

ARTICLE XVI.—*Seal.*

The board of directors shall provide a suitable seal containing the name of the Exchange, the date of its incorporation, and other appropriate words, and may alter the same at pleasure.

ARTICLE XVII.—*Amendment.*

These by-laws may be altered or amended at any annual meeting of the members or at any other meeting of the members called for that purpose by the directors, by a vote representing two-thirds of the members. The written assent of two-thirds of the members is effectual to repeal or amend any by-law or to adopt additional by-laws

FORM OF CROP CONTRACT.

This Agreement, Made the.....day of.....A. D. 192.., between the.....Association, a corporation incorporated under the laws of the State of California, and having its principal place of business at.....in said State, and affiliated with the California Fruit Growers Exchange, a corporation incorporated under said laws for the purpose of marketing California citrus fruits, the party of the first part, and the undersigned citrus fruit growers of.....said State, the parties of the second part,

Witnesseth:

SALE AND DELIVERY OF FRUIT.

1. That, for and in consideration of the sum of one dollar, the receipt of which is hereby acknowledged by each of the second parties, and of the covenants and agreements herein contained, each of the second parties hereby sells and conveys, and agrees to pick, haul and deliver to the first party, at its packing house at .....in said State, for the purpose of packing, selling, and marketing, all the citrus fruits now growing upon his land and premises, and all that, during the term of this agreement, may be grown upon his lands and premises, or any other lands or premises owned by him and situated in the County of....., said State, at such time or times, and from time to time, and in such quantities, as the first party, or its agent, may direct.

PACKING AND MARKETING.

2. The first party agrees to receive, pack, sell, and market all of said fruit whenever a market may be found for the same, which, in the judgment of the first party and in accordance with its rules and regulations, shall justify such selling and shipment.

PROCEEDS.

3. The first party agrees to pay to each of the second parties the amount received for his said fruit, less its regular charges for packing, shipping, selling, and marketing the same.

WITHDRAWAL OF LAND.

4. If any of the second parties shall, in good faith, sell his said lands, or any part thereof, he shall be released from this agreement as to all lands sold and conveyed, upon giving notice in writing thereof to the first party.

TERM OF AGREEMENT.

5. This agreement shall continue in full force and effect from the date hereof until November 1 of the year of the date hereof, and for a further term next thereafter of five (5) years.

SUSPENSION OF AGREEMENT.

6. Any of the second parties to this agreement may be released therefrom and terminate and end the same as to him, by filing a written notice of his desire to be so released, with the party of the first part, during the first fifteen (15) days of August of any year during the term of this agreement.

BY-LAWS.

7. The by-laws of the first party and the contract between the first party and its local exchange and the contract between such local exchange and the California Fruit Growers Exchange shall be parts of this agreement and shall be binding upon each of the second parties except in these particulars in which it is expressly herein stipulated to the contrary.

RULES AND REGULATIONS.

8. The packing, selling, and marketing of the said fruit shall be done in accordance with the rules and regulations of the first party now or hereafter adopted and observed by it.

PURPOSE-POSSESSION.

9. Each of the second parties fully understands that the purpose, among others of this agreement, is to maintain and to increase to its greatest efficiency the present cooperative fruit selling and marketing agency known as the California Fruit Growers Exchange, whose stockholders are the representatives of various sub-exchanges, and the stockholders of which said sub-exchanges are the representatives of the various and numerous fruit associations of the State of California, of which the first party is one; and that to accomplish this purpose it is necessary that each of the parties of the second part shall strictly and fully comply with and perform the stipulations of this agreement on his part, and therefore, each of the second parties expressly stipulates and agrees that he will not sell or otherwise dispose of his said fruit to any person or corporation other than to said first party, as herein provided; and that in case he shall fail, refuse or delay to pick and deliver his said fruit to the first party, within five (5) days after demand therefor, the first party shall have the right, at its option, at any time or times thereafter, and from time to time, to enter into the possession of his said premises and to pick his said fruit, or any part thereof, and take the same to the packing house of the first party, and pack, sell and market the same, all at his cost and expense, which said cost and expense shall and may be retained by the first party out of any moneys received from the sale of any of his fruit.

LIQUIDATED DAMAGES.

10. The actual damages which will be sustained by the first party because of the failure or refusal of any of the second parties to pick and deliver his said fruit as herein provided and the further detriment and injury to the first party because of

the effect of said breach upon the California Fruit Growers Exchange and its efficiency, and the expenses to which the first party will be put and the damage caused by outlays incurred and to be incurred by it in providing means for selling and marketing the said fruit, are impossible now to estimate or fix, and, therefore, the same are estimated and agreed upon as twenty-five cents (25 cents) for each box of fruit grown or sold, which sum shall be allowed in any action brought by the first party to recover damages for the breach of this agreement by any of the second parties, should the first party elect, as it may elect, to bring such action.

IN WITNESS WHEREOF, the said corporations have each hereunto caused its corporate name and seal to be affixed by its President and Secretary duly authorized by resolution of its Board of Directors, duly passed and adopted, and all other parties have hereunto signed their individual names and affixed their individual seals.

.....Association.

By.....
President

By.....
Secretary

.....owning.....acres.

.....owning.....acres.

FORM OF CONTRACT BETWEEN A DISTRICT EXCHANGE AND LOCAL ASSOCIATION.

This Agreement, Made and entered into this.....by and between the.....a corporation duly organized and existing under the laws of this State, with its principal office in.....California, the party of the first part, and the other corporations and parties who sign this agreement, the parties of the second part.

Whereas, the system of marketing and handling citrus fruits devised by the California Fruit Growers Exchange has been approved by the parties hereto as a satisfactory system of cooperative marketing; NOW, in consideration of the foregoing, the parties of the second part do hereby severally agree to market all fruit now controlled by them or that may hereafter come under their control during the term of this agreement through said first party, it being understood and agreed that the said party of the first part has entered into an agreement with the California Fruit Growers Exchange for the sale of said fruit in accordance with the general plan adopted by said Exchange, to which plan and agreement reference is hereby made, and the same is hereby made a part of this agreement.

The said party of the first part is hereby authorized to retain from the net proceeds rendered to it by the agents of the California Fruit Growers Exchange, or from any other sales of fruit under this agreement, such sum of money as their Board of Directors may from time to time designate or deem sufficient to cover the expenses incurred in making such sales. Should the actual expenses incurred by the said party of the first part during the term of this agreement amount to less than the fund so retained, then the surplus shall be refunded to the said parties of the second part, according to the number of boxes of fruit shipped by each, the Board of Directors adjusting the refund upon an equitable basis. Should the actual expenses incurred by the said party of the first part during the term of this agreement amount to more than the fund so retained, then the said parties of the second part agree to pay an assessment to be levied upon them to make up the amount of the deficiency, said assessment to be levied upon the number of boxes shipped by each of the said parties of the second part, but oranges, lemons and other citrus fruit, as well as auctions and agents' sales, may be assessed on a separate basis, and for different amounts.

Provided that, whatever difference, if any, is made by the California Fruit Growers Exchange in its charges for marketing oranges, lemons, and other citrus fruit, respectively, shall be followed and carried out in the adjustment of moneys retained by the party of the first part from the said parties of the second part.

The party of the first part agrees to use its best efforts to sell and dispose of the fruit controlled by the said parties of the second part, but it is expressly understood that in so doing it acts only as the agent of the said parties of the second part, and assumes no responsibility or financial liability therefor further than it agrees to turn

over to the several parties of the second part the cash proceeds of all sales of their fruit as soon as received, retaining the brokerage for expenses, as above provided.

Each of the parties of the second part further agrees to pay to the party of the first part as liquidated damages the sum of 25 cents a box on all citrus fruits controlled by it, which, through any fault of its own, it fails to deliver to the party of the first part, loaded on cars at shipping station of said party of the second part.

This agreement shall be effective September 1, 1920, and shall continue in force and effect until the first day of September, 1940; provided, that any of the parties hereto may withdraw from and cancel this agreement during the first fifteen days of August in any year by giving notice in writing during said period to the party of the first part.

This agreement may be executed in one or more parts, and each part shall be deemed an original and all parts together shall constitute one original instrument.

In witness whereof, the said corporations have each hereunto caused its corporate name and seal to be affixed by its President and Secretary duly authorized by resolution of its Board of Directors, duly passed and adopted, and all other parties have hereunto signed their individual names and affixed their individual seals.

.....

[SEAL] By.....President

By.....Secretary

.....

[SEAL] By.....President

By.....Secretary

FORM OF CONTRACT BETWEEN A DISTRICT EXCHANGE AND THE EXCHANGE.

This Agreement, Made this.....by and between the California Fruit Growers Exchange, a corporation organized under the laws of California, party of the first part, and certain corporations affiliated with the party of the first part, and who execute this agreement, parties of the second part;

Witnesseth: That, Whereas, it has been deemed necessary by the parties of the second part to associate themselves together, and to cooperate in the matter of developing the citrus industry and marketing its products for the following named:

PRINCIPAL PURPOSES AND OBJECTS.

To lessen the cost of marketing by creating Agencies who will act for each member.

To insure the collection of sales.

To facilitate the collection of damage claims.

To encourage the improvement of the product and the package.

To increase the consumption of citrus fruit by developing new markets and to aid in supplying all the people with good fruit at a reasonable price.

To secure a fair and just government of all bodies affiliated with these parties, democratic in principle and through which at all times all policies shall be controlled by the majority will of the shippers connected therewith in just proportion to shipments made; that the business engaged in, being interstate in character, to secure at all times full compliance with the laws of the United States concerning Interstate Commerce, and to that end prevent any organization connected therewith from having any power or authority in contravention of the laws of the United States concerning such business; the general plan being to unite in securing those results which are beneficial to all alike, but at the same time preserving to each shipper complete independence of action as to all of his shipments. Thereunto the following stipulations are agreed to in lieu of all previous agreements.

First.—The party of the first part shall be considered the general agent of all the parties of the second part in all matters concerning the marketing of citrus fruit, and such other matters as are incident thereto within the limitations hereafter provided, with power to provide a suitable place for doing business.

To elect or appoint a suitable official force to supervise the business, at such salaries as may from time to time be considered proper by the directors of the party of the first part.

To employ a force of sales agents stationed at various points throughout the United States, Canada, and such other countries as may be decided upon, as will be sufficient to dispose of the products of the second parties in all available territory.

To organize and maintain a claim department for the handling of all claims.

To maintain a legal department to take care of the necessary litigation, and furnish advice to the various organizations connected herewith.

To maintain an advertising bureau for the purpose of stimulating consumption and demand.

To create any other department, or incur any other expense which may be deemed necessary by the Board of Directors of the party of the first part to protect all those interests of the parties of the second part of a general nature, and which will affect all alike, within the scope of the duties of the first party as herein provided.

Cooperation.

It is agreed that all of the information obtained by the party of the first part; all of the facilities established by it; all of the books or records maintained by it; all of the agencies, both general or local, shall always be at all times available to the second parties, or their accredited representatives.

The second parties will at all times cooperate for whatever object may, within the law, be deemed to be for the general good. They will each and all abide by and be bound by all the contracts, agreements and sales made by the party of the first part for any member of such organization, and will promptly ratify any action taken by the party of the first part, or any of its authorized agencies in behalf of any or all of the parties of the second part within the scope of the authority of such agencies.

Life of Agreement.

This agreement shall be effective September 1, 1920, and shall continue in force and effect until the first day of September, 1940, and during that period the parties of the second part and all associations, corporations, partnerships, or individuals connected with such second parties, or shipping through such second parties, or any of them, will ship all their citrus fruits through the party of the first part and the marketing agencies by it established, and for such period of time will consign all shipments to the party of the first part at some point where the said party of the first part has representation, through and by the local exchange with which each association is affiliated; provided, however, that any party to this agreement may withdraw therefrom on the first day of September of any year, and be no longer bound by the stipulations herein agreed upon, by filing a written notice of withdrawal with the party of the first part ten days or more before any such date, and each of said parties of the second part agrees that if it shall at any time during the life of this agreement fail to ship all its citrus fruits as hereinbefore agreed upon, or shall dispose of all or any of it elsewhere, or otherwise than as herein agreed upon, that it will forfeit and pay as liquidated damages to the party of the first part, an amount equal to twenty-five (25) cents a box on all such citrus fruits which are, or may be shipped or sold otherwise than as stipulated in this contract, providing the first party was ready and willing to receive and handle such fruit.

Reserved Rights of Shippers.

It is understood, however, that each shipper reserves to itself the right to regulate and control its own shipments, to use its own judgment, and decide for itself when and in what amounts it shall ship; to what markets it shall ship; where its products shall be sold, and, except at auction points, the price it is willing to receive. Fully reserving the right of free competition with all other shippers, including other members of this organization, unhampered and uncontrolled by any one.

EXPENSES.

First.—All fruit, however, sold, shall be assessed alike per box in proportion to the Carriers' estimated weight, to pay salaries and expenses of the General Manager, Division Managers, and their assistants and all employees, rents and expenses of the Los Angeles Office of the party of the first part, including all telegrams and general expense, such as printing, supplies, and inspection of fruit; also to pay the expense of establishing a Claim Department for the purpose of making and collecting claims against Railroad Companies and other corporations and individuals, including the salary of a Claim Agent and all necessary assistants and clerks and all other necessary expense; also to pay all necessary legal expenses, including salaries of one or more attorneys for necessary legal advice and all legal expenses necessary to prosecute claims and suits in courts, both Federal and State, and before the Interstate Commerce Commission; also to pay all expenses of proper and judicious advertising for the purpose of extending and increasing the sale of the citrus fruit of the parties of the second part; also to pay all proper expenses of extending the sale of said fruit in foreign countries, and all other necessary and proper expense that may be incurred in protecting and furthering the interests of the said parties of the second part, excepting that fruit sold by the local Exchanges at their expense and risk, either at auction or at private sale, at such points as the Board of Directors may from time to time determine, shall be excluded from these charges and assessed an arbitrary charge to be fixed by the Board of Directors of the party of the first part.

Second.—All fruit sold, at auction or on commission, except as hereinbefore provided, shall, in addition to expense named in first paragraph, be assessed alike per box in proportion to Carriers' estimated weight, to pay the salaries and expenses of Agents, Inspectors, and other expenses as may accrue in auction agencies.

All auction and commission charges shall be borne by the respective shipments and deducted from the proceeds of sale of each car or shipment.

Third.—All fruit sold otherwise than herein provided shall, in addition to expense named in first paragraph, be assessed alike per box in proportion to Carriers' estimated weight, to pay all expenses connected with the marketing of the same not provided for in subdivision No. 1 of this article, including all salaries, brokerages, office and incidental expenses of the various agents (not including auction agency expenses).

ASSESSMENTS.

The said party of the first part shall make a statement within thirty days after the first day of September of each year, and a readjustment of such statement once a month, covering all shipments for that season, made up to the time of the statement or readjustment, and levy an assessment on the parties of the second part according to the number of boxes shipped. Such assessment shall be due within three days from date on which it is made. In the event of failure to pay any such assessment within ten days from its date, the party of the first part may refuse to handle any fruit for the delinquent party until all assessments past due have been paid.

BONDS OF AGENTS.

Agents shall be selected and employed by the party of the first part, on salaries or brokerage, and each shall be required to furnish a satisfactory bond in some responsible guarantee company for the faithful performance of his duties.

INFORMATION AS TO PRICES.

The party of the first part shall require its agents to keep it fully informed as to the condition of the market, the arrival and condition of the fruit, the wholesale and retail prices of fruit in their respective districts, and to furnish such other information as may be required of them, and such information shall be immediately transmitted by said party of the first part to all the parties of the second part.

QUOTATIONS BY SECOND PARTIES.

No schedule of prices or quotations shall be issued or be distributed by any of the parties of the second part, except through the party of the first part.

No Special Agents.

None of the parties of the second part shall employ any traveling man, agent, or solicitor for the sale of its fruit.

Copies to Second Party.

Copies of all correspondence or other matters in any manner affecting the interests of the parties of the second part shall be promptly forwarded by the respective agents to the parties of the second part whose interests are involved.

Money Direct to Second Parties.

The party of the first part shall cause the fruit furnished by said several parties of the second part to be sold for the account of the party of the second part furnishing the fruit, and full report and account sales shall be promptly rendered therefor, and payment of money made direct to the party of the second part shipping such fruit, and a copy of the account sales shall be rendered to the party of the first part.

Estimates.

Each of the parties of the second part shall furnish to the Secretary of the party of the first part an estimate of the number of cars of each variety of fruit controlled by said second party as often as called for by the Board of Directors of said first party.

Responsibility of First Party.

The party of the first part agrees to use its best efforts to sell, market, and dispose of the fruit belonging to said parties of the second part, as aforesaid, but it is expressly agreed between the parties hereto that the said party of the first part in the sale and disposal of said fruit acts only as an Agent of the said parties of the second part and shall not be held liable for any loss that may result in disposing of such fruit, except as herein provided.

Provided, however, that the party of the first part in the selling, marketing, and disposing of the said fruit shall have the right to establish one or more grades or brands and to prescribe the standards of quality and pack of fruit to be marketed under such grades or brands, and to permit the parties of the second part to market their fruit under such grades or brands upon compliance by such parties of the second part with the rules and regulations so established.

Losses.

The only losses assumed by the party of the first part are those arising from financial failures or default of purchasers after having positively accepted the fruit, and which default is not due to complaint of the buyer of the quality, condition, or grade of the shipment, and these losses shall be assessed to the parties of the second part upon a percentage based upon the gross f. o. b. returns for the year.

Claims.

The party of the first part shall maintain a claim department for the collection of all claims against railroads and transportation companies, and at the request of any of the parties of the second part, the party of the first part shall to the best of its ability collect and prosecute on behalf of the party in interest any claim for overcharge or loss and damage not herein provided for, and also, upon the approval of its Board of Directors, bring suit and prosecute the same in the courts, all at the expense of the party of the first part.

Interests of Parties.

All matters of business involving the interests of the parties hereto not herein specified, shall be determined by the said party of the first part, or by a meeting of representatives from said parties of the second part, as hereinafter provided.

Board of Representatives.

To aid in carrying out the provisions of this agreement, a Board of Representatives is hereby created, to which each of the Exchanges, parties of the second part, shall be entitled to appoint one representative, to hold at the pleasure of the appointing party, such party having the right to remove or change its representative at any time; provided, that all appointments, removals and changes shall, by the party making

he same, be certified in writing to the party of the first part, and shall take effect when so certified. The representatives so appointed shall constitute such board, and its due organization and powers shall not be affected by the failure of any party to make or certify its appointment of a representative. The President of the California Fruit Growers Exchange shall be ex-officio chairman of said Board, but in case of his absence or failure to perform his duties as such chairman, the Board shall elect a chairman for the time being. The Board shall elect its own Secretary, who shall keep a record of its proceedings.

Meetings of said Board of Representatives shall be immediately called by the acting Secretary of the Board of Directors of the California Fruit Growers Exchange at the request of any two members of said Board. Said meetings shall be held in the office of the party of the first part at eleven o'clock a. m. on the next regular meeting day of the Board of Directors of the party of the first part. Notice of all meetings to be given to all the representatives of the parties of the second part by notice through the United States Post Office mailed on the day of calling such meeting. Representatives of a majority of the total shipments of the previous season at any meeting called as herein provided, shall constitute a quorum.

Said Board shall have supervision of all matters pertaining to carrying out the provisions of this agreement, as advisory to the Board of Directors of the party of the first part; and upon request of any two members of said Board of Directors, any question as to carrying out any of the provisions of this agreement shall, by said Board of Directors, be referred to said Board of Representatives.

At any meeting of said Board of Representatives, upon demand of any representative, the vote of any question under consideration shall be taken upon a percentage basis, in which case each representative shall have the same percentage of the total vote as the party appointing him shipped of the total of all fruit shipped by the parties of the second part hereto for the year ending August 31 last prior to said meeting.

When any vote on any question pertaining to the carrying out of any provision of this agreement shall have been taken by said Board of Representatives, the fact of such vote and the result shall be certified to the Board of Directors of the party of the first part and the California Fruit Growers Exchange shall take notice of the result of such action as instructions from the second parties to the contract and carry on the business as directed by such vote of the representatives of said second parties.

PARTIES MAY SIGN SEPARATE INSTRUMENTS.

This agreement may be executed in one or more parts and each part shall be deemed an original, and all parts together shall constitute one original instrument.

ASSOCIATIONS AND GROWERS CONTRACTS.

Each party of the second part agrees to furnish to the party of the first part a copy of the contracts between associations and growers or the local exchange and the growers or associations, each of which contracts shall in terms ratify this agreement.

In witness whereof, The said corporations have each hereunto caused its corporate name and seal to be affixed by its President and Secretary thereunto duly authorized by resolution of its Board of Directors duly passed and adopted.

CALIFORNIA FRUIT GROWERS EXCHANGE.

Actual Date of Signing.....

[SEAL] By.....President

By.....Secretary

.....

[SEAL] By.....President

By.....Secretary

GRADE SPECIFICATIONS.

Sunkist Oranges.—Mature oranges of one variety; of good eating quality; well-grown specimens of normal form, picked from the tree; of good color for the variety; of good texture, excluding rough, coarse, more than slightly puffed, more than slightly scarred, more than slightly sunburned, or misshapen fruit, or dirty fruit, making it uninviting in appearance to the consumer; substantially free from scale, other insect or fungous diseases, splits, or defects of any kind that cause fruit to decay; excluding fruit showing effects of frost or which cuts dry for any other reason. Oranges packed under the Sunkist brand shall not vary more than 10 per cent below the foregoing specifications, except as provided in the special rule relating to frosted or dry fruit.

Red Ball Oranges.—Mature oranges of one variety, of good eating quality; well-grown specimens of fair form; picked from the tree; of fair color for the variety; of fair texture; excluding badly sunburned, very rough, very coarse, badly puffed, badly scarred fruit or fruit so scaly as to make it uninviting in appearance to the consumer, substantially free from other insect or fungous diseases, splits or defects of any kind that cause fruit to decay; excluding fruit showing effects of frost or which cuts dry for any other reason. Oranges packed under this grade shall not vary more than 5 per cent below foregoing specifications.

Sunkist Lemons.—Lemons, well-grown specimens of normal form; excluding fruit with abnormally long necks; of good uniform color; excluding fruit more than slightly sunburned or more than slightly green in color; of good texture, excluding rough, coarse fruit and fruit with deep dark scars, or dirty fruit making it uninviting to the consumer; substantially free from scale, other insect or fungous diseases or defects of any kind that cause fruit to decay; excluding spongy, hollow-center fruit and fruit affected with Interior Decline, Blossom End Decay or fruit showing effects of frost or which cuts dry for any other reason. Lemons packed under the Sunkist Brand shall not vary more than 10 per cent below foregoing specifications except as provided in the special rule relating to frosted and dry fruit.

Red Ball Lemons.—Lemons, well-grown specimens of fair form, of fairly uniform color; excluding fruit badly sunburned or very green in color; of fair texture; excluding very rough, very coarse, badly scarred, dirty fruit, fruit so scaly as to make it uninviting in appearance to the consumer, other insect or fungous diseases or defects of any kind that cause fruit to decay; excluding very spongy or badly hollow-center fruit and fruit affected with Interior Decline, Blossom End Decay, or fruit showing effects of frost or which for any other reason cuts dry. Lemons packed under this grade shall not vary more than 5 per cent below foregoing specifications.

TABLE 1.—*Bearing and nonbearing orange and lemon trees in California by counties, 1919.*

County.	Oranges.		Lemons.	
	Bearing.	Nonbearing.	Bearing.	Nonbearing.
Los Angeles	2,624,172	549,361	829,286	226,265
San Bernardino	2,334,245	380,659	293,499	100,508
Tulare	2,041,277	527,294	107,290	80,337
Orange	1,434,078	728,140	490,204	72,219
Riverside	1,047,343	134,653	320,066	72,212
Ventura	229,886	83,059	407,369	105,928
Fresno	150,577	72,433	18,023	16,264
San Diego	96,788	23,208	278,480	72,217
Sacramento	77,948	21,994	2,709	157
Butte	77,729	12,852	2,157	87
Kern	51,144	25,879	962	614
Glenn	40,699	7,380	1,172	5,740
Placer	21,011	2,796	656	148
Stanislaus	11,626	1,705	1,484	137
Tehama	9,843	1,479	265	517
Sutter	6,831	1,187	302	229
Sonoma	5,539	414	666	1,026
Santa Clara	5,414	4,016	2,143	2,950
Colusa	4,982	778	44,233	161
Santa Barbara	4,359	4,235	77,925	19,142
Solano	3,586	448	290	73
Merced	3,388	2,679	174	52
San Joaquin	3,257	1,136	456	265
Imperial	2,512	1,498	478	208
Yolo	1,958	937	156	196
Yuba	1,409	2,774	105	73
Alameda	1,100	260	678	144
Mariposa	994	52	35	10
Napa	720	186	118	74
Santa Cruz	552	288	2,183	1,189
Contra Costa	453	885	110	142
Madera	422	241	57	51
San Luis Obispo	411	429	898	184
Nevada	365	2,921	15	1,880
Calaveras	274	98	32	13
Amador	144	14	2	3
Kings	101	72	8	7
Shasta	83	110	2	20
Tuolumne	80	38	7	3
Eldorado	78	2	.....	.....
Marin	76	57	9	1
Monterey	48	31	34	36
Lake	38	8	4	1
San Benito	31	25	11	12
San Mateo	22	48	11	32
Mendocina	.....	.....	6	8
Total	10,297,593	2,598,759	2,884,770	781,535

TABLE 2.—*Carload shipments of citrus fruit from California, 1886 to 1922 (year ended October 31).*

	Oranges.	Lemons.	Total.		Oranges.	Lemons.	Total.
1886–87	2,200	12	2,212	1904–05	27,342	4,274	31,616
1887–88	2,500	20	2,520	1905–06	23,739	3,789	27,528
1888–89	2,782	26	2,808	1906–07	26,319	3,507	29,826
1889–90	3,476	34	3,510	1907–08	27,688	4,959	32,647
1890–91	4,016	40	4,056	1908–09	34,376	6,196	40,572
1891–92	4,400	52	4,452	1909–10	28,252	4,891	33,143
1892–93	5,871	65	5,936	1910–11	39,508	6,891	46,399
1893–94	5,726	145	5,871	1911–12	34,547	6,133	40,680
1894–95	4,687	335	5,022	1912–13	16,027	2,304	18,331
1895–96	7,010	565	7,575	1913–14	45,306	3,032	48,338
1896–97	5,972	1,378	7,350	1914–15	39,744	7,068	46,812
1897–98	13,987	1,166	15,153	1915–16	37,897	7,186	45,083
1898–99	9,448	903	10,351	1916–17	46,591	7,915	54,506
1899–1900	16,362	1,447	17,809	1917–18	17,119	6,337	23,456
1900–01	21,173	2,924	24,097	1918–19	39,429	10,007	49,436
1901–02	17,571	2,816	20,387	1919–20[1]	[2]38,077	8,680	46,757
1902–03	21,080	2,649	23,729	1920–21[1]	[2]45,236	11,659	56,895
1903–04	26,684	2,782	29,466	1921–22[1]	[2]29,573	9,926	39,499

[1] Year ended Aug. 31. Figures for the seasons from 1886–87 to 1918–19 inclusive are from the annual reports of the California State Board of Agriculture; for seasons 1919–20 to 1921–22, inclusive, the figures given are from the reports of the California Fruit Growers Exchange.
[2] Grapefruit shipments are included.

TABLE 3.—*Shipments of citrus fruit by the exchange, 1894 to 1922.*

Season ended Aug. 31.	Packed boxes.			Carloads.		
	Oranges and grapefruit.	Lemons.	Total.	Oranges and grapefruit.	Lemons.	Total.
1894						5,343
1895						4,190
1896						2,574
1897			612,878			1,656
1898			1,297,008			3,505
1899			997,694			2,695
1900			2,164,793			5,849
1901			3,933,607			10,629
1902			2,610,400			7,054
1903						[1]
1904						[1]
1905			[1]5,108,511			14,021
1906			4,705,979	10,127	2,369	12,496
1907			6,149,626	13,507	2,454	15,961
1908			6,628,784	14,230	3,238	17,468
1909			8,710,746	18,673	3,937	22,610
1910	6,578,516	1,000,285	7,578,801	16,633	3,006	19,639
1911	9,272,499	1,570,290	10,842,789	23,443	4,680	28,123
1912	7,502,949	1,729,407	9,232,356	18,955	4,693	23,648
1913	3,994,712	945,356	4,940,068	10,086	2,346	12,432
1914	10,148,388	1,116,477	11,264,865	25,555	2,631	28,186
1915	9,651,578	2,241,623	11,893,201	24,193	5,619	29,812
1916	9,693,233	2,408,384	12,101,617	23,935	5,893	29,828
1917	12,835,803	2,656,536	15,492,339	29,828	6,391	36,219
1918	6,452,792	2,190,083	8,642,875	14,090	5,124	19,214
1919	11,134,717	3,728,100	14,862,817	24,464	8,701	33,165
1920	12,369,359	3,542,442	15,822,001	26,662	7,799	34,461
1921	14,219,800	4,107,086	18,326,886	31,180	9,779	40,959
1922	9,164,603	3,724,838	12,889,441	20,924	9,120	30,044

[1] No accurate records of shipments are available for the period during which the California Fruit Agency operated.

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ORGANIZATION OF THE UNITED STATES DEPARTMENT OF AGRICULTURE.

December 8, 1923.

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This bulletin is a contribution from

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